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Effects of a clinical feedback system on client and therapist outcomes in a rural community mental health center

Linda Sue Trudeau
Iowa State University

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**Effects of a clinical feedback system on client and therapist outcomes in a
rural community mental health center**

by

Linda Sue Trudeau

**A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY**

Major: Human Development and Family Studies (Marriage and Family Therapy)

Major Professors: Linda Enders and Daniel Russell

Iowa State University

Ames, Iowa

2000

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**Graduate College
Iowa State University**

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Linda Sue Trudeau
has met the dissertation requirements of Iowa State University**

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Co-major Professor

Signature was redacted for privacy.

Co-major Professor

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For the Major Program

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TABLE OF CONTENTS

| | |
|-------------------------------------------------------------|-----|
| LIST OF FIGURES | v |
| LIST OF TABLES | vi |
| ABSTRACT | vii |
| ACKNOWLEDGEMENTS | ix |
| CHAPTER 1. INTRODUCTION | 1 |
| Rationale for the Study | 5 |
| Research Questions | 9 |
| CHAPTER 2. REVIEW OF THE LITERATURE | 11 |
| The Evolution of Managed Care | 11 |
| Reviews of Mental Health Managed Care Initiatives | 17 |
| Recent Developments in Psychotherapy Research | 31 |
| Utilization of Psychotherapy Research in Policy Decisions | 34 |
| Approaches to Treatment Outcomes Measurement and Management | 35 |
| Domains of Mental Health Care Outcomes | 38 |
| Assessment of the Economic Benefits of Mental Health Care | 39 |
| Assessment of Provider Outcomes | 42 |
| Studies of Practitioner Responses | 45 |
| Moving From Outcomes Measurement to Outcomes Management | 50 |
| Significance of this Study | 53 |
| Hypotheses | 57 |
| CHAPTER 3. METHODS | 60 |
| Overview | 60 |
| Sample | 60 |
| Measures | 62 |
| Procedure | 72 |
| CHAPTER 4. RESULTS AND DISCUSSION | 76 |
| Descriptive Statistics | 76 |
| Testing of the Hypotheses | 79 |
| Discussion | 88 |
| CHAPTER 5. CONCLUSION | 95 |
| Summary | 95 |
| Recommendations and Further Research | 102 |

| | |
|-----------------------------------------------|-----|
| APPENDIX I. SURVEY INSTRUMENTS | 106 |
| APPENDIX II. SAMPLE OF FEEDBACK TO CLINICIANS | 126 |
| APPENDIX III. ADDITIONAL FIGURES | 133 |
| REFERENCES | 152 |

LIST OF FIGURES

| | |
|-------------------------------------------------------------------------------------------|----|
| Figure 1. Average Scores on Total Mental Health Over Time | 81 |
| Figure 2. Average Scores on Total Mental Health over Time for the Treatment Conditions | 84 |
| Figure 3. Average Scores for the Managed Care and Non-Managed Care Groups Over Time | 85 |

LIST OF TABLES

| | |
|------------------------------------------------------------------------------------------|----|
| Table 1. Demographic and Mental Health Status of the Experimental and Control Conditions | 77 |
| Table 2. Demographic and Mental Health Status of the Managed Care Groups | 77 |
| Table 3. Correlations Among the Outcome Variables | 79 |
| Table 4. Average Scores for the Scales Over Time | 82 |
| Table 5. Percentage Within the Healthy Range | 82 |
| Table 6. Evaluation of Managed Care | 86 |
| Table 7. Evaluation of the Feedback Instrument | 88 |

ABSTRACT

This study was undertaken following the advent of managed care. Clinicians have been critical of managed care's use of utilization review and arbitrary session limits, claiming these restrictions have not allowed them to provide needed care to some clients.

The study evaluated the Outcomes Questionnaire (OQ), a monitoring system that measures mental health symptoms and functioning (Lambert et al., 1996). Using this system, clients are assessed at multiple time points over the course of psychotherapy and compared to community samples; when clients are not improving or are deteriorating, adjustments in the treatment regimen can be made.

The study was conducted in a community mental health center in a rural midwestern state with 127 clients measured at the initial time point, 77 at time 2, and 59 at time 3. Clinicians were randomly assigned to two conditions: 1) a feedback condition, where clients were assessed at each therapy session, the results graphed, and feedback given to the therapist; 2) a no feedback condition, where clients were assessed at each session, but no feedback given; and 3) a control condition, where clients received treatment as usual. All participating clients were assessed with multiple instruments at the initial session, after two months of therapy, and after four months of therapy.

The results demonstrated the efficacy of providing mental health services by showing positive results on several measures of quality of life, including mental health symptoms, physical health symptoms, self-esteem, perceived stress, service utilization and work-related measures. The study sample was generally satisfied with the services, although level of

satisfaction was unrelated to progress in therapy. Although therapists generally disliked managed care, the managed care clients did no worse than the non-managed care clients, and there were indications that managed care clients did somewhat better. The provision of outcome feedback to clinicians on client progress was generally well accepted by this group of 11 clinicians, although no indication of differences in improvement over time for the clients whose therapists received outcome feedback was detected. Study limitations may be responsible for the lack of outcome feedback effects.

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CHAPTER 1

INTRODUCTION

Mental health service delivery systems have changed radically since the 1980s, due primarily to the paradigm shift in health care financing that produced managed care (Steenbarger, Smith, & Budman, 1966). “Relentless market forces” (Stone, 1995, p.353) have created a radical and dramatic change in the treatment of mental disorders and substance abuse. For-profit companies that provide managed behavioral health care are the most rapidly growing segment of the mental health care business for both the private and public sectors (Inglehart, 1996b; Stone, 1995; Sturm, 1999).

These changes in the mental health service delivery system were initiated when health care costs began skyrocketing. From 1965 to 1992, health care costs rose from 7% to 13% of the gross national product. Much of this increase was due to the increased use of inpatient psychiatric and substance abuse services (Fuller, 1995; Schuster, 1993). Insurance coverage had traditionally favored inpatient hospitalization for mental health care, which undoubtedly influenced the use of this service over less expensive alternatives, such as partial hospitalization, day treatment, or outpatient care (Inglehart, 1996a). In addition, indemnity insurance policies with fee-for-service reimbursement encouraged the practice of hospitalizing patients, and by funding unlimited outpatient coverage, also encouraged long-term therapy (Phillips & Rosenblatt, 1992; Wells, 1995). Mental health practice was characterized by lack of clear standards of care and evidenced little accountability. The most resources were often invested in those who were the least seriously impaired (Mechanic, McAlpine, & Olfson, 1998).

The concern with medical care costs led to efforts toward health care reform. The failure of the Clinton plan, which hoped to provide for universal care while avoiding a European style single-payer national health care program, created a need for a market-based response (DiNitto, 2000). The many forms that response took came to be known as managed care. The concept of managed care can be understood as health care services paid for all or in part by a third party, where decisions regarding the criteria for insurance coverage (medical necessity) and reimbursable levels of treatment are made by a third party agent, rather than the practitioner in consultation with the patient or client (Shapiro, 1995). Managed care programs are commonly designed to “control access to care, types of care delivered, or the amount/costs of care . . . as well as monitoring and improving quality and/or outcomes of care” (Wells, Astrachan, Tischler, & Unutzer, 1995, p. 57).

Managed care alters clinical practices by design. Although managed care was initially utilized in general health care, it eventually diffused to mental health care. It has had its major impact on levels of inpatient care and on professional autonomy. Psychiatrists suffer larger constraints on clinical autonomy than other medical specialists, with inpatient care being denied by utilization review organizations at a rate of 11.9%, compared with 6.5% of medical and surgical admissions (Schlesinger & Gray, 1999).

Managed care plans are beginning to dominate the medical insurance market. A study conducted in 1995 by KPMG Peat Marwick and Wayne State University surveyed 2,037 employers who employed from 1 to 200 or more employees. This survey indicated that 73 percent of all Americans who received their health insurance through an employer were covered by a managed care policy – defined as all Health Maintenance Organizations (HMOs),

Preferred Provider Organizations (PPOs), and point-of-service plans (POS). This is up from 51 percent two years earlier (Jensen et al., 1997). Current estimates suggest that approximately 150 million persons in the U.S. are covered by private managed behavioral health-care plans (Manderscheid, Henderson, Witkins, & Atay, 1999).

For-profit companies frequently manage care for mental health services. These freestanding organizations provide support services to self-insured employers or to insurance companies (Cuffel et al., 1996). In the 1990s, the cost-management industry was among the fastest-growing segments of the health care economy, generating \$7 billion in revenues by 1993 (Woolhandler and Himmelstein, 1991). These managed mental health care organizations vary in the amount of risk they assume, from no or partial risk for the cost of services to full risk (Peele, Lave, & Xu, 1999).

Payers, employers, consumers, providers, Managed Care Organizations (MCOs) and legislators all want data on quality and cost outcomes of mental health care. Currently, however, evaluation of behavioral health managed care data is primitive. We know little about variability between MCO's capacities for care, risk arrangements, intensity of utilization reviews, the way practice guidelines are used, or how quality assurance systems work. Moreover, outcome assessment has typically been focused on cost, reduced utilization, and patient and family satisfaction, with little emphasis on clinical status, quality of life, family burden, employment functioning, or rates of dangerous events like suicide, assault, arrest or imprisonment (Mechanic, 1998).

Evaluations of the performance of MCOs, as exemplified by report cards such as the Health Plan Employer Data and Information Set (HEDIS 3.0) used by the National

Committee on Quality Assurance (NCQA), currently include minimal assessment of outcomes related to behavioral health (Rodriquez, 1998), although NCQA does intend to improve the documentation of behavioral health quality (Steenbarger, Smith & Budman, 1996). The intended purposes of outcome assessment emphasize two important uses for findings: 1) accountability of programs for use by policy makers, funding sources, management, and consumers, and 2) quality improvement measures, where data on individual consumers is provided to the clinical staff as feedback to be used in on-going treatment planning or staff improvement (McGlynn, 1996; Sperry, Brill, Howard, & Grissom, 1996). Cummings (2000) has recently predicted that with the emphasis on cost containment, medical cost research along with independent, nonbiased documentation of therapeutic effectiveness and quality will provide the data that purchasers need to rationally distribute the shrinking behavioral health care dollar.

Future trends do indicate the encouragement of outcomes measurement and outcomes management strategies by practitioners and researchers, as managed care companies begin to evaluate clinical outcomes as part of their quality assurance initiatives (Dornelas, Correll, Lothstein, Wilber & Goethe, 1996; McCarthy, Gelber & Dugger, 1993; Kane, Bartlett & Potthoff, 1995). This trend is encouraged by recent federal and state laws that increasingly reflect a need to impose quality-of-care standards on managed care companies, rather than let the dictates of financial interests control health care (Sleek, 1996).

There are indications in the emerging literature that outcomes' measurement may be expanding in managed care organizations, and the results of clinical outcomes assessment may be utilized more often in treatment planning decisions (Berman, Darling, Hurt & Hunkeler,

1994; Kane, Bartlett, & Potthoff, 1994; Pallak, 1994; see also a Special Issue: Outcome Assessment of Psychotherapy, American Psychologist, 51, 1996). However, there is little agreement about what should be measured and which measures to use. Over 95 outcome measures have been routinely used in mental health settings, and concerns have been expressed that not all measures are grounded in theory or useful to clinicians for improving outcomes (see Abrahamson, 1999; Andrews, 1995; Maruish, 1994; Smith, Manderscheid, Flynn & Steinwachs, 1997; Speer, 1998; Steinwachs, Flynn, Norquist & Skinner, 1996).

Rationale for the Study

The hope has been that managed care can produce both cost savings and higher quality care through more appropriate utilization and the provision of more efficient and effective services (Wells & Sturm, 1995a). Geller (1996), a psychiatrist interested in public systems managed mental health care, writes,

By limiting authorization of expenditures to only those services deemed medically necessary and appropriate, delivered in the least restrictive and intrusive treatment setting, and only by previously designated qualified practitioners, the advocates of managed mental health care believe that the right care can be delivered to the right patients at the right time, in the right setting, by the right type of provider, and in the right amount, at considerable cost savings as compared to care that is unmanaged. (p. 226)

There are indications, however, that the goals of improved quality and lowered costs may be incompatible. Researchers involved with the Medical Outcomes Study (MOS), a four-year longitudinal study conducted by the RAND Corporation, which included depression as a mental health tracer condition, found that quality improvement raises treatment costs (Rogers, Wells, Meredith, Sturm, & Burnam, 1993). In addition, several analysts have pointed out that managing mental health care is expensive. It is estimated that managed care companies must decrease costs about 32 to 35 % for them simply to break even (Borenstein, 1996; Lazarus, 1996; Shapiro, 1995). Many authors have identified outcome studies that suggest that cost savings come at the expense of access to and quality of care (Karon, 1996; Lurie, Moscovice, Finch, Christianson, & Popkin, 1992; Miller, 1996; Wells, Hays, Burnam, Rogers, Greenfield, & Ware, 1989). Given these conditions, it is not surprising that while managed care companies have perhaps failed to live up to their promises to reduce costs and improve quality, they have increased their own profitability (Kaley, Eagle, & Wolitzky, 1999).

Clearly, there is a need for evaluations of both the quality and cost-effectiveness of mental health services. Ideally, this will require collaboration between psychotherapy researchers, whose expertise is in clinical and functional patient outcome assessment, and economists, whose expertise is in cost-effectiveness and cost-benefit analysis (Phillips & Rosenblatt, 1992; Krupnick & Pincus, 1992; Power & Eisenberg, 1998). This collaborative effort must include evaluation of the managed care system itself, its management techniques, and the cost-based incentives that impact the type and quality of care delivered (Fogel, 1993; Hodgkin, 1992; Herron, Eisenstadt, Javier & Primavera, 1994; Jellinek & Nurcombe, 1993).

In order to be relevant to practice and address the concerns of consumers and payers, psychotherapy researchers must emphasize psychotherapy services research that evaluates the relative value of an intervention to a population of individuals in a naturalistic setting, rather than using randomized controlled designs in order to specify causality more robustly. The traditional psychotherapy research goal of specifying causality is inadequate to address cost-effectiveness, since it is impossible to research all the potential combinations of therapy, therapists, and patient types in order to rule out relevant differences among types of treatment (Doherty, 1999).

Managed care companies that have initiated efforts to measure outcomes have primarily evaluated patient satisfaction rather than clinical outcomes (American Managed Healthcare Association, 1995; Fogel, 1993; Jellinek & Nurcombe, 1993). However, opinions differ in the literature about the predictors of patient satisfaction. Some researchers question whether satisfaction is predicted by clinical outcomes or by other factors, such as favorable personal responses to providers – termed therapeutic alliance – and by the patient’s own health status or personality characteristics (Barker, Shergill, Higginson, & Orrell, 1996; Davies & Ware, 1988; Hall, Milber, & Epstein, 1993; Marshall, Hays, Sherbourne, & Wells, 1993; Roberts, Pascoe, & Attkisson, 1983; Rubin, 1990; Solomon & Draine, 1994). Because of the uncertainty regarding the sources of consumer satisfaction, it should be thought of as primarily a measure of quality of care, rather than as a clinical outcome (Harris, Swindle, Mugai, Weinberger, & Tierney, 1999). Rather than relying on measures of satisfaction alone, the concept of quality of life, which is multidimensional and includes mental health symptoms and distress, sense of well-being, physical health, satisfaction with relationships, ability to

function in social roles and ability to perform work or self-care functions, should establish the parameters of clinical outcome research (Speer, 1998).

The analysis of cost-effectiveness, cost-efficiency, cost-benefit, or cost-utility (all measures of the value of mental health services) is even more complex and beyond the scope of the current study. However, all of these methods of analysis employ various techniques to measure noncost outcomes, such as estimating the value of resources that improve with treatment, including physical health costs (known as medical cost-offsets), improved wages and work-related benefits, and reduced use of social services (Hargreaves, Shumway & Hu, 1999; Hays, Barlow & Nelson-Gray, 1999; Kamlet & Kleinman, 1999; Miller & Magruder, 1999).

Given the many cost-saving methods employed by managed care companies and the interest generated by stakeholders in evaluating the provision of mental health care to a population, there is a need to document the effectiveness of care on a case-by-case basis in order to appropriate the limited resources most effectively. The present study evaluated an outcomes monitoring system that provides tracking to clinicians on measures of symptom distress, interpersonal relations, and social role functioning (Lambert, 1994; Lambert & Brown, 1996) in a rural Community Mental Health Center. The goal was to determine the effectiveness of the monitoring system. In addition, management system effects were evaluated in order to assess the possibility of a moderating effect by type of management on outcomes. In the context of a rural Community Mental Health Center with various contracts and funding sources, managed care only affects clinician decisions when a utilization review (UR) process is in effect that can constrain and limit level or length of care. Thus,

management systems that include UR were compared with those that do not. Client outcomes in this study include subjective discomfort (intrapsychic symptoms), interpersonal relationships, social role functioning, physical health, perceived stress, self-esteem, service utilization, and work/school productivity. In addition, the study evaluated the effects of both clinical outcomes and therapeutic alliance on satisfaction with care. And finally, the agency staff evaluated the feedback system and the management systems.

Research Questions

To summarize, this study addresses the need to evaluate clinical outcomes in order to know if cost-savings from managed care come at the expense of health outcomes. This need has developed since the initiation of cost-saving strategies known as “managed care” revolutionized the way mental health services are delivered. The stated goal of managed care is to provide quality care cost-effectively; however, since practice guidelines and protocols based on research have been slow to develop, many managed care organizations base their utilization review techniques on inadequate science (Seligman, 1996). To date, most evaluations of managed care programs have used data on patient satisfaction and cost savings to evaluate the effectiveness of the care management system, rather than data on clinical outcomes. Since satisfaction with care does not consistently correlate with positive clinical outcomes (Lunnen & Ogles, 1998), there is a need to evaluate clinical outcomes as well.

In addition, an outcomes monitoring system that provides feedback to clinicians regarding their clients’ progress may serve to assist in on-going treatment and discharge planning, thus improving client outcomes in a timely and cost efficient manner. If such a

system proves effective, UR reviewers could use data on individual client progress to inform treatment decisions, thus improving quality by individualizing care. This study evaluates an outcomes monitoring system that provides feedback to clinicians to determine the effects of the monitoring system on measures of client outcome. In addition, the study tests for moderation by management systems. That is, the study tests whether or not the effect of the monitoring system on client outcomes varies depending on the management system, UR or no UR. Moreover, in order to be utilized in a naturalistic setting, the process must be well-received by the clients and clinicians who will be participating, so the study assesses the clinicians' evaluations of the monitoring system and their views on its burden for both clients and clinicians.

The literature review that follows tracks the evolution of managed care and its cost-savings strategies and reviews several large-scale evaluations of managed care initiatives, primarily in the public sector. Next, developments in psychotherapy research and responses of care providers to managed care are reviewed. And finally, the significance of this study and the study hypotheses are presented.

CHAPTER 2

REVIEW OF THE LITERATURE

The Evolution of Managed Care

Many reviews have traced the development of management systems from Kaiser Permanente's initiation of the first HMO in 1933 (Bennett, 1993; MacFarland, 1994; Stone, 1995). These early staff model HMOs were designed to provide medical services, including some preventative services, to all enrollees at considerable cost savings to the purchasers. Nearly all HMOs are capitated prepaid health care delivery systems, though several forms of HMOs have evolved over the years (MacFarland, 1994).

The evolution of management systems can be divided into "generations," or "developmental stages" (Cuffel et al., 1996; Hodgkin, 1992; Inglehart, 1996; Lazarus, 1996; Wells, 1995). Although various authors differ somewhat in their categorization, these evolutionary stages can be distilled into four primary phases; however, the continuation of management techniques from one phase to the next creates some overlap in the assessment of the effects of these phases on the various stakeholders.

Phase 1. All agree that the initial strategy for cost containment was utilization management (UM) or utilization review (UR), which consists of three main techniques: 1) precertification or pre-treatment authorization, which evaluates the patients, usually over the telephone, and assigns them to an approved facility or provider for a specified level and duration of treatment; 2) concurrent review, which evaluates appropriateness, type, and intensity of ongoing care, and is often requested by providers when the pre-authorized limits

have been met but the provider assesses a need for continuing care; and 3) case management, which generally targets high users and attempts to find alternative, less costly approaches, such as community support, or lower, less expensive levels of care (Hodgkin, 1992; Wells, 1995).

UR is the common denominator of every managed care plan. If done appropriately, it can reduce unnecessary or ill-conceived clinical practices, but it is almost universally perceived by providers as constraining their autonomy and increasing the costs to the provider for advocating for their client (Schlesinger, 1998; Sweeney, Stutman, & Martin, 1998). These costs are frequently described as a “hassle factor” – extensive documentation and review practices. Clinicians also fear that by advocating for their client, they may be placing themselves in a position to be black-balled by the MCO for being a more costly provider; however, by not acting as an advocate, they may be violating ethical principles and placing themselves at risk of a lawsuit (Galambos, 1999; Pingatore, 1999; Surles & Fox, 1998). Initially, UR focused on hospitalized patients, often limiting length of stay, though rarely denying initial hospitalization. Next, UR moved into outpatient care (Anderson & Berlant, 1995).

There is a great deal of variability between MCOs in the review process and the constraints placed on provider recommendations for number of sessions required. Early assessments of the UR process seem to demonstrate that the “hassle factor” for carve-out mental health MCO plans (which only manage behavioral health care) was higher than for integrated plans (which manage both physical and behavioral health; see phase 3); however, this hassle factor did not translate into a higher level of denial of care (Rubin et al., 1992).

Findings indicate that review processes rarely results in successful appeals, with 58% of UROs reporting successful appeals of 3% or less (Rubin et al., 1992). Clinicians complain that often they are not apprised of the criteria for decision-making by the managed care company, which contributes to the difficulties they have advocating for more care for the clients they believe are in need (Hodgkin, 1992).

Currently, there is little external oversight for the appeals process (Schlesinger, 1998). Critics claim the UR process acts as a barrier in order to control costs by limiting access to care, limiting the amount of care provided, and limiting provision of care to lower-cost providers, thus lowering the quality of care (Borenstein, 1996; Geller, 1996; Miller, 1996; Sederer & Dickey, 1996; Stone, 1995; Welch, 1996). A recent longitudinal study covering a 5-year period found that a utilization management program which covered 2,443 privately insured psychiatric patients resulted in increased odds of rehospitalization of patients whose length-of-stays were restricted. For each day that the requested length-of-stay was reduced, the adjusted odds of readmission within 60 days increased by 3.1% ($p = .004$). The authors recommend continued monitoring of UR procedures, since the costs associated with restricting care may actually increase when decisions are made that are not clinically justified (Wickizer & Lessler, 1998).

In contrast, documentation of another managed care program demonstrated a non-significant change in rehospitalization compared with the previous fee-for-service indemnity plan that had been in place. A plausible reason for this finding is that the plan may have been less restrictive than most plans in terms of benefit limits, with 120 days of no-cost inpatient coverage in a general hospital and an additional 60 days of care in a psychiatric hospital

(actually an increase in limits compared with the plan it replaced). Although lengths of stay and hospitalization costs decreased significantly with the advent of the managed care plan, follow-up care increased significantly, indicating that care management in this plan did not result in lower quality of care, at least as measured by rehospitalization rates (Merrick, 1998). These studies are important, as they demonstrate the necessity of evaluating managed care techniques and processes in order to determine best practices for achieving the desired results – the optimal combination of lower costs and higher quality care.

Phase 2. During the next phase of managed care development, plans sought to control costs further by developing networks called Preferred Provider Organizations (PPOs). In a PPO, selected practitioners are contracted by the plan and are guaranteed referrals in exchange for discounting rates. The plans also began developing standard benefit limits and treatment protocols to refine both the contracting process and UR. Treatment protocols were either based on clinical consensus, the scientific literature, or an arbitrary session limit derived from the modal number of therapy visits (Wells, 1995; Welch, 1996). The identification of protocols based on empirically validated approaches has not been standard in the industry. Although randomized clinical trials have developed treatment protocols codified in specific step-by-step treatment manuals, these manual-based approaches have not been widely adopted by managed care plans for several reasons: clinicians have difficulties adapting to these manualized treatments, the approaches often do not match consumer preferences, and MCOs' typically impose lower limits on the number of outpatient sessions than are required by manualized approaches (Abrahamson, 1999; Strosahl, 1998).

Critics have accused managed care plans of cutting the level of services and substituting less well-trained practitioners on the basis of inadequate science (Seligman & Levant, 1998). For instance, integrated plans frequently require gate keeping by a primary care physician, and fears were that these physicians would prescribe psychotropic medication in lieu of a referral to a mental health provider. However, results of some recent surveys have shown that there may be reluctance on the part of family practitioners to treat patients with serious and persistent mental illness (Rohland, Rohrer, & Culica, 1999), and insurance claims data from 75 plans with more than 600,000 enrollees concluded that the majority of patients with depressive disorders and almost all patients with psychotic disorders had contact with a psychiatrist (Sturm & Klap, 1999).

Results from studies on the relationship between practitioner training and quality of service have been mixed (Garfield, 1984; Lipsey & Wilson, 1993). Howard, Cornille et al. (1996) have suggested that type and extent of training, personal characteristics of practitioners, and level of oversight necessary to insure that therapy is adequately delivered remain unknown. Some caution appears to be justified by a recent study showing that when an HMO permitted additional sessions without restrictions, masters-level practitioners used 5.5 sessions more than the initial authorized number, while doctoral-level practitioners used 2.5 additional sessions, a significant difference. Additionally, masters-level therapists had an 18% dropout rate vs. a 7% dropout rate for doctoral-level practitioners. Thus, training levels did affect efficiency and effectiveness of patient care in this study (Howard, 1998).

Phase 3. The next phase may be characterized as managing care by placing providers at some degree of financial risk, as the providers contract with a plan through a Physician

Hospital Organization (PHO) or some other form of capitation. Thus, the PHO or provider group must provide the utilization management. Many managed care or behavioral health care companies are now forming these “vertically integrated delivery systems,” thus assuming the role of both managing and providing mental health care (Inglehart: 1996; Wells, 1996; Stone, 1995). Many plans “carve-out” mental health care to a separate Managed Care Organization. These carved-out plans that separate mental health care from other health services may have incentives that serve to modify the care that is provided. For instance, primary care physicians may decide to refer mental health patients to mental health specialists, rather than treat these clients themselves, and conversely, the carve-out capitated mental health organizations may have incentives to refer somatizing patients to specialists such as internists. This is often referred to as “cost-shifting” (Stone, 1995). A common fear expressed by many authors is that a two-tiered system may develop whereby private systems of care become more restrictive in services provided so that many high cost patients are forced into public systems of care or become the wards of homeless shelters or prisons (Gittelman, 1998; Manderscheid, Henderson, Witkin, & Atay, 1999; Mechanic, McAlpine, & Olfson, 1998; Sturm, 1999).

Phase 4. Currently, the most recent stage of managed care has seen PHOs and other provider alliances bypassing managed care organizations to contract directly with employers who are purchasers of services (J. Lazarus, in Wagner & Gartner, 1996). This puts the provider group at risk and introduces an ethical problem when a caregiver must keep the needs of the entire covered population in mind, rather than advocate for a particular client. Another recent trend is the formation of horizontally and vertically integrated systems that

“carve-in” mental health care. Stone (1995) believes that plans will continue to consolidate and may eventually resemble behemoth monopolies or oligopolies, such as the big three automakers.

Keeping track of the mergers and acquisitions in the managed behavioral health care business can be a difficult process. The managed care scene is changing so rapidly that reports on the number of companies and their enrollments are outdated before they go to press. For instance, in 1996, the three companies that served 55% of enrollees included Value Behavioral Health, Human Affairs International, and Merit Behavioral Care; many other companies were in existence serving the additional 45% of enrollees. By the next year, 95% of enrollees were served by the biggest three companies, Magellan Health Services (60%), Value Behavioral Health (24%), and United Behavioral Health (11%); many of the smaller companies were either out of business, merged or acquired (Cummings, 2000). By 1999, these three companies had continued to merge and acquire companies and remained the largest, serving about 100 million Americans. Value Behavioral Health, after more acquisitions, was now called ValueOptions (Sturm, 1999).

Reviews of Mental Health Managed Care Initiatives

There have been several large scale evaluations published of managed mental health care, primarily in the public sector. Interest has been high in evaluating these public programs, primarily because of the expense of treating public clients, many of whom are chronically mentally ill.

Treating people with severe mental illness is, indeed, very expensive. Hollinsworth and Sweeney (1997) obtained data for 1,890 clients in non-metropolitan Wisconsin who utilized mental health and substance abuse services in a one-year period between 1989 and 1990. They found that expenditures per client averaged \$10,995, with a maximum of \$95,093. In Rochester, New York, Babigian et al. (1989) found costs per year for chronically mentally ill patients who were institutionalized to be \$83,746 for a non-managed care group.

Accelerating costs in Medicaid mental health payments have been threatening states' budgets for a number of years and required cutbacks in other programs and services (Sullivan, 1995). Beginning as early as 1982, states began submitting waiver applications to the Health Care Financing Agency to initiate managed care approaches to Medicaid programs. The goals were to gain more control and predictability of costs, and to improve access (Stevenson, Bevilacqua & Koyanagi, 1997).

As of June, 1999, 45 states and the District of Columbia had applied for waivers either under section 1915(b) of Title XIX of the Social Security Act, which authorizes two-year waivers of certain federal rules to allow states to demonstrate innovative approaches to financing care in only part of the state or for certain categories of beneficiaries, or under Section 1115, which allows a state to set up a five-year demonstration to experiment with various types of health care reform statewide and to make widespread use of managed care. These waivers require a research and demonstration component (Manderscheid, Henderson, Witkins, & Atay, 1999; Rowland & Hanson, 1996).

Waivers allow states to integrate behavioral health care services within a managed care plan, to carve out mental health care, or to partially carve out care for some Medicaid

patients, such as the disabled. This paper will summarize several of the evaluations and reviews of these public managed care programs as well as selected private managed care demonstration projects. Since the current study takes place in Iowa, that state's managed care program has been included in this summary, along with other large-scale projects that have been established long enough to have been subjected to meaningful evaluations.

Hennepin County, Minnesota. One of the earliest managed mental health care experiments used a randomized design to evaluate managed care vs. fee-for-service for Medicaid clients in Hennepin County, Minnesota, which includes Minneapolis. This experiment included both physical and mental health in prepaid HMO plans, which were compared with traditional Medicaid fee-for-service plans.

Results provided no consistent evidence of harmful effects of enrolling chronically mentally ill Medicaid clients in prepaid care. There was no decrease in use of community-based treatment programs by this group; however, there was a slight increase in the likelihood of inpatient admissions for mental health and substance abuse in the prepaid group, although the prepaid group had shorter lengths of stays. The prepaid group also had less outpatient physical care, fewer annual visits, and fewer inpatient admissions for physical problems. They were less likely to receive either inpatient or outpatient chemical dependency treatments. Access measures indicated a small improvement on six of the nine access measures (Lurie, Moscovice, Finch, Christianson, & Popkin, 1992; Moscovice, Lurie, Christianson, Finch, Popkin & Akhtar, 1993; Christianson, Lurie, Finch & Moscovice, 1985; Christianson, Lurie, Finch, Moscovice & Hartley, 1992; Finch, Lurie, Christianson & Moscovice, 1992).

The demonstration program was discontinued early because the HMO that served the majority of the prepaid mental health clients terminated its participation, citing financial losses resulting from an unexpectedly high use of services by enrollees. This Blue Cross/ Blue Shield plan believed it had been “selected against” because of the relatively large number of mental health providers in its network, and the high percentage (58%) of prepaid blind and disabled Medicaid enrollees who selected this plan (Christenson, Lurie, Finch & Moscovice, 1988).

The period of observation in this study was short, and the researchers cautioned against generalizing to settings in which cost-containment methods differ from this demonstration site. For this demonstration, policies did not allow the prepaid plans to require prior authorization by a physician for referral to community-based mental health treatment programs, and program policies did not disrupt ongoing treatment. Only 15% of the clients changed providers (Lurie et al., 1992). Thus, although cost write-offs were higher for the prepaid group across all categories of providers and services, indicating some indirect subsidy by the non-profit and public sectors, the researchers state that the public community-based programs who received subsidies based on volume had little financial incentive to aggressively pursue private reimbursement for services (Christenson et al., 1992).

Monroe-Livingston County. Another capitation project was undertaken in Monroe-Livingston counties in New York, which includes the city of Rochester. Five community mental health centers formed a non-profit corporation and developed capitation agreements as part of a demonstration project. For the research funded by the National Institute of Mental health (NIMH), only the most chronically and seriously ill groups were evaluated (Babigian & Marshall, 1989; Babigian & Reed, 1992).

The project demonstrated considerable cost-savings in the capitated group, primarily through a reduction in use of inpatient care, with substitution of outpatient services (Babigian et al., 1992). Non-monetary outcomes were equivocal. Researchers report that fewer experimental group patients died, more worked in competitive employment, and fewer required supervised residential living. However, the experimental group also reported being slightly less satisfied with life (59 versus 63 percent), were victimized more often (37 versus 22 percent), and contributed less to home and community. The family members and significant others in this group also reported more problems based on community burden measures (Babigian et al., 1992).

Clinical outcomes after two years of follow-up indicated that although the experimental group spent less time in the hospital, there were no differences between the groups in levels of symptoms or functioning. Researchers suggested that by pooling funding streams and increasing provider flexibility, clinical decisions can be based more on clinical requirements than on funding restrictions (Cole, Reed, Babigian, Brown, & Fray, 1994).

The researchers caution that selection bias may have been a factor because patients self-selected into the capitated payment group. However, the measures they assessed, including demographics, Global Assessment Scale (GAS) scores, diagnosis, number of symptoms, ability to perform self-care, and behavior problems, accounted for only 19.5 percent of the variance in enrollment status. The researchers also identified potential confounding factors, such as the addition of more case management services and the expanded ability of clients to purchase needed resources, which were applied to both the experimental

and control groups. Thus, the level of improvement in overall care for the control group, which was not anticipated, may confound the study's conclusions (Babigian et al., 1992).

Utah. The Utah Prepaid Mental health Plan went into effect in July of 1991. Three CMHCs provided mental health services for 52 percent of Medicaid beneficiaries, with the assumption of full financial risk taking place in January, 1994. First year evaluations prior to the assumption of full risk indicated that there was a significant reduction in inpatient expenditures for beneficiaries at the capitated sites (Christianson & Gray, 1994).

Manning, Stoner, Lurie, Christianson, Gray and Popkin (1993) analyzed the first year experience of the Medicaid beneficiaries with a diagnosis of schizophrenia. There were no significant differences between prepaid and fee-for-service patients on mental health status, functioning, satisfaction with care, and utilization of services, although during this first year capitation incentives were weak. Several evaluations of the program continued during the following years, with a continued focus on clients diagnosed with schizophrenia as a tracer condition. This diagnostic group represents a vulnerable population that may be likely to suffer ill effects from a managed care program (Schlesinger & Mechanic, 1993).

Findings after 4 years indicated several differences between the managed care (capitated) CMHC clients and the traditional fee-for-service clients after adjusting for baseline differences. Differences in processes of care indicated that although both groups decreased the number of psychotherapy visits, the capitated group decreased more. This group was also more likely to terminate care or be lost to follow-up, to receive a suboptimal dose of an antipsychotic medication, and to experience a change of primary therapists. Outcome measures indicated that the capitated group improved less over time in terms of mental health

status, symptoms and functioning. This finding was most pronounced for the subset of beneficiaries with the worst mental health status at baseline. On the other hand, no differences were found on measures of social functioning, general physical health status, or satisfaction with care (Lurie, Christianson, Gray, Manning, & Popkin, 1998). Further analysis of care patterns indicated that there was an increase in medication visits for the capitated group, while the use of day treatment decreased (Liu et al., 1999).

Another follow-up study found few differences between the capitated and fee-for-service groups in terms of financial health. Both groups remained on sound financial footing. The capitated group expanded programs for children, day treatment programs, and case management, resulting in increases in the number of patients served (Wyant, Christianson, & Coleman, 1997). However, staff reported feeling frustrated with increasing caseloads and had less time to be proactive when a client was doing poorly (Lurie et al., 1998).

Massachusetts. The Massachusetts Medicaid waiver program utilized a private agency, Mental Health Management of America, Inc. (MHMA), to manage the mental health and substance abuse program for non-HMO enrolled Medicaid recipients beginning in 1993 (Callahan, 1994). Results of the Massachusetts plan are important because it was the first state to receive a 1915b waiver from HCFA requiring all Medicaid beneficiaries to enroll in either a local HMO or a selected Medicaid-approved primary care clinician. It was also the first state to use a single proprietary vendor to manage the delivery of all Medicaid mental health benefits (Dickey, Norton, Normand, Azeni, & Fisher, 1998).

In 1996, MHMA failed to have its contract renewed, and a partnership composed of two proprietary MCOs, Value Behavioral Health, Inc. and FHC Options, won the contract

with a low bid. Problems with MHMA included a failure to turn in reports required under its contract and complaints that many legitimate claims were denied. In fact, both a trade organization of providers and an organization representing 6 hospitals filed lawsuits that resulted in substantial settlements that were not reflected in MHMA expenditure reports (Fendell, 1998).

Prior to the Medicaid waiver in 1991, a special commission set up by the governor developed a plan to consolidate and close nine state hospitals serving persons with mental illness, mental retardation, and chronic illness. Thus, the Massachusetts Department of Mental Health (DMH) was also emphasizing psychosocial rehabilitation, independence and choice for consumers, and reduced utilization of inpatient care along with increased community services. These two entities were thus initiating cooperative efforts, such as collaboration on the development of community-based hospital diversion services, emergency screening services, case management and other support services (Leadholm & Kerzner, 1995). DMH and MHMA jointly developed protocols regarding assessment, referral, and inpatient transfer procedures and criteria. These efforts helped define the boundary between acute, medically necessary services provided by MHMA, and sub-acute rehabilitative and social support services administered by DMH (Elias & Navon, 1996).

The evaluation of the MHMA program after one year found that inpatient treatment for both mental illness and substance abuse declined dramatically, substituting lower cost-forms of residential treatment for inpatient care with little increase in the use of outpatient services. Costs declined more than 20 percent, with half of the reduction attributed to utilization review and half to lower negotiated prices with providers (Callahan, 1994).

Quality as assessed by recidivism rates and reports of providers remained about the same following the initiation of the care management, whereas services to children were reported as more problematic, as reflected by an increase in the readmission rates for children, who may have been prematurely discharged from inpatient care (Callahan, 1994).

Long-term follow-up evaluations of this program have differed in their conclusions. One report concludes that positive findings, including lower costs for inpatient care attributed to both reductions in reimbursement rates and lowered utilization, outweighed negative findings, such as a slight increase in rehospitalization and lower rates of follow-up care. This report also concludes that there has been no evidence of cost-shifting to state-supported inpatient care or medical care (Dickey et al., 1998). Another evaluation supported by the Mental Health Legal Advisors Committee, Commonwealth of Massachusetts, is much more critical. Among the conclusions are that the proprietary nature of the MCOs did not allow for monitoring or oversight by the state, resulting in a lack of important information. This report also cited the failure of the MCOs to provide timely reports. Critics claimed that consumer and provider satisfaction measures were lacking or inadequate, and that clinical standards were adopted without sufficient input from providers. For instance, a client's inadequate progress toward objectives and failure to comply with treatment plans were criteria for discharge from outpatient treatment under MHMA. Thus, often patients who were the most in need of treatment but attended erratically were discharged; in essence, a recipient's mental illness could form a basis for denying that person mental health care. Some providers complained that although protocols were inadequate, providers did not speak up for fear of retaliation by exclusion from the network (Fendell, 1998).

Iowa. The managed care initiative in Iowa is generally evaluated as one of the most positive of the public sector managed care programs (Sabin & Daniels, 2000; Sturm, 1999). In 1994, Iowa was one of ten states with waivers that related only to mental health care, thus establishing a separate statewide mental health managed care system. Iowa contracted with a for-profit managed care firm, MEDCO, to provide management services. Prior to initiating services, MEDCO was purchased by Kohlberg, Kravis, Roberts, & Co. and its name was changed to Merit Behavioral Health Care of Iowa. Merit commenced services on March 1, 1995 (Rohland & Rohrer, 1996). Magellan Behavioral Healthcare later purchased Merit, and the most recent renewal extends the management contract through June 30, 2001, with three optional one-year extension periods (Sabin & Daniels, 2000).

Although meaningful clinical outcome data are not yet available, as is true in many if not most public sector managed care initiatives, assessments of the problems and solutions in the processes of care as documented by reviewers indicate that Iowa has been able to negotiate policies that satisfy most stakeholders, including consumer groups such as the National Alliance for the Mentally Ill (NAMI; Rohland, 1998; Sabin & Daniels, 2000; Stout, 1998). The state Department of Human Services (DHS), which awarded the contract, has acted as a strong advocate for high quality care, and the MCO was responsive to problems that became evident in the early stages of contract implementation (Rohland, 1998). For instance, after complaints from providers and consumers to DHS, negotiations with the MCO resulted in a change in some policies within the first year of services. New policies provided that no person requesting service was to be denied unless reviewed by a physician; patients were not to be discharged from inpatient care until a safe living arrangement was available and

a plan for follow-up was in place; and, most importantly, utilization management guidelines were adjusted to include psychosocial factors such as family stability and environmental factors in the definition of medical necessity (Rohland, 1998; Sabin & Daniels, 2000).

Although early surveys of provider satisfaction have been quite negative, there is evidence that evaluations are becoming more positive over time as providers adapt to the MCO, which has in turn adapted by changing its policies and procedures as a result of advocacy efforts (Russell et al., in press). One policy change that was well accepted by providers was the initiation of a 10-session pass through, meaning that all enrollees were allowed 10 sessions without precertification. Further evaluation of the impact of the program on access and quality of care await more robust clinical outcome data.

Fort Bragg and New York. Although not comprehensive statewide program evaluations, the recent Fort Bragg Demonstration Project and the Medicaid Cluster Care Demonstration in New York City are interesting evaluations of some managed care strategies and are sure to have an impact on policy makers.

At Fort Bragg, an \$80-million project was designed to test whether a continuum of mental health and substance abuse services for children and adolescents was more cost-effective than services delivered via the more typical fragmented system. Forty two thousand child and adolescent dependents of military personnel in the Fort Bragg catchment area were offered services in the demonstration project, with children receiving traditional CHAMPUS services at two comparable army posts serving as the comparison group. The mental health outcome study collected data from 574 demonstration and 410 comparison children between

the ages of 5 and 17 and their families to determine the effect of the demonstration on child and adolescent psychopathology, psychosocial functioning, and family functioning.

For the demonstration group, the continuum of care philosophy provided the theoretical underpinnings of service delivery. The demonstration project offered a comprehensive and coordinated range of services emphasizing community-based treatment. These services included in-home counseling, after-school group treatment services, day-treatment services, therapeutic homes, specialized group homes, and 24-hour crisis management teams. A comprehensive intake assessment was provided to determine the appropriate level of care, and services were linked through a case management component and interdisciplinary treatment teams led by a doctoral-level staff person. Transportation and other wraparound services were also provided (Bickman, Heflinger, Lambert, & Summerfelt, 1996).

The study concluded that the demonstration had no better effect on short-term clinical outcomes than traditional services, and that the costs for patients enrolled in the demonstration were much higher than the comparison group for the three-year study period. The demonstration site spent an average of \$7,777 per treated child compared with \$4,904 at the comparison site. The demonstration site served 14% of the children in the catchment area, compared to 7% served in the comparison site, provided more timely treatment, and demonstrated significantly more satisfaction with services from surveys completed by both adolescents and parents (Bickman, 1996; Bickman et al., 1996).

The demonstration study could be considered a study of managed care, if one defines such care as a form of care management that utilizes case managers and treatment teams

responsible for level of care assignments, conducts utilization reviews, requires certification and contracting with providers, and has a quality improvement system (Bickman, 1996). However, there were really no incentives for cost-containment. Feldman (1997) points out that the opposite may have been the case, as this cost-based reimbursement system for providers rewards the providers for doing more. Feldman suggests that the lower use of inpatient care could have saved money for the demonstration project. However, the costs were apparently shifted to outpatient care and other alternative services, where utilization was very high.

A series of articles in the Journal of Child and Family Studies (Burchard, 1996; Evans & Banks, 1996; Friedman, 1996; Henggeler, Schoenwald, & Muanger, 1996; Kingdon & Ichinose, 1996) and another series in the American Psychologist (Behar, 1997; DeLeon, & Williams, 1997; Feldman, 1997; Hoagwood, 1997; Saxe & Cross, 1997; Weisz, Han, & Valeri, 1997) raise issues and questions about the study and its conclusions, which are answered in rejoinders by Bickman and colleagues (Bickman et al., 1996; Bickman, 1997). After considering the critiques, the researchers conclude that, although systems of care can accomplish important objectives such as increasing access, reducing dropouts, and improving patient and family satisfaction, they cannot solve the fundamental problem of ineffective services that do not improve client outcomes (Salzer & Bickman, 1997).

An evaluation of the Medicaid shared-aide home health care for the frail elderly and the disabled in New York City known as “cluster care” was conducted by Feldman, Latimer & Davison (1996). They found a cost savings of 10 percent using the innovative method of contracting with vendors for home health care services to cover an entire multiple-dwelling

unit. A critique of the design and analysis of this study by Hornbrook (1996) discusses the difficulties of conducting policy-relevant research when policy makers want answers quickly in order to make timely decisions. Researchers typically urge caution in drawing conclusions based on a single study, recognizing the difficulties of identifying associations, causality and influence without multiple replications, especially when using a quasi-experimental design with non-equivalent groups. The original researchers point out in a rejoinder that the imposition of impractical methodological requirements such as multiple replications will inhibit timely, affordable policy-driven research that can monitor the impact of rapid changes in the healthcare delivery system (Feldman et al., 1997).

In summary, while some studies have found little evidence of harmful effects of enrolling chronically mentally ill Medicaid clients in prepaid managed care, researchers caution that results are frequently specific to the settings and cost-containment methods used (Babigian, et al., 1992; Callahan, 1994; Christianson & Gray, 1994; Feldman et al., 1996; Lurie et al., 1992; Manning et al., 1993). There has been some evidence of more problematic outcomes for poorer enrollees (Rogers et al., 1993), those who are more severely disabled (Feldman et al., 1996; Lurie et al., 1998), and for children (Callahan, 1994). There is also some evidence that managed care strategies for utilization and service delivery do not necessarily produce better clinical outcomes and, without cost-control mechanisms, may be even more expensive than traditional care (Bickman et al., 1995, 1996a).

Cuffel et al. (1996) have suggested, “managed care in the public mental health system has surpassed efforts to develop a systematic literature concerning its theory, practice and outcome” (p. 109). The diverse approaches of states to reforms, diverse populations in the

waivered states, and diverse methods of reporting results have precluded global generalizations of the results of these experiments. It is possible to say, however, that the programs are saving the states' money, which is often used to extend health insurance coverage to previously uninsured people, meeting the goal of improved access to care (Sullivan, 1995).

Recent Developments in Psychotherapy Research

Psychotherapy research has a long history, and has passed the uphill struggle to prove its effectiveness, initiated by the famous Eysenck study which cast doubt on the benefits of psychotherapy compared with no treatment (Eysenck, 1952). By 1980 a consensus was reached that psychotherapy was demonstrably more effective than no treatment at all (Bergin & Lambert, 1978; Smith & Glass, 1977; VandenBos & Pino, 1980; Gurman, 1973), although some (cf. Garfield, 1984) are less convinced that the controversy has been fully resolved. More recent meta-analyses demonstrate the efficacy of psychological, educational, and behavioral treatment for individuals, families, and couples (Lipsey & Wilson, 1993; Seligman, 1995; Shadish, et al., 1993).

Contemporary research explores the process of change in psychotherapy; the interaction effects among the predictors of outcome, such as client characteristics, therapist characteristics, therapeutic modalities, orientations, and techniques; and management systems effects. Researchers are also interested in the response of individual clients to the therapeutic process, rather than the evaluation of aggregated groupings alone, in order to assist clinicians

in the ongoing management of therapy (Hawkins & Mathews, 1999; Howard, et. al., 1996; Ogles & Lunnen, 1996; Sechrest, et al., 1996; VandenBos, 1996).

Clinicians are interested in such information as well; however the information they value may differ from the information valued by researchers (Bickman, et al., 2000). Many authors speak of the research-practice gap, whereby researchers complain that practitioners do not incorporate information from research results into their practice and practitioners complain that research results are not relevant to practice. The “Boulder Model” of the scientist-practitioner has a long history in psychology, though it is often more of an ideal than a reality (Goldfried & Wolfe, 1996; Raimy, 1950). This model promotes the use of program evaluation research to improve clinical practice and differs from the goal of improving scientific knowledge, though the techniques used in both models are often quite similar (Hays, Barlow, & Nelson-Gray, 1999). It is only by implementing outcome assessment measures in clinical practice and evaluating effects on client and clinician outcomes that the most appropriate measures for clinical situations can be determined.

Recently, researchers have distinguished between “efficacy” studies and “effectiveness” studies. “Efficacy” studies are controlled, standard experimental studies with subjects randomly assigned to either treatments or to a control or placebo group. Treatments are often standardized in terms of dosage and protocols, and participants are often selected for the study by diagnosis. This type of research is the standard method for proving that treatments work, and is the research methodology of choice for some interventions, such as psychotropic medications (Howard, Orlinsky & Leuger, 1995a). “Effectiveness” or “clinical utility” studies are conducted in naturalistic settings with clients freely choosing therapists and

therapists modifying treatment as their judgment dictates. Instead of using random assignment, effectiveness studies use statistical techniques such as causal modeling or residualized change scores (pre-test scores used to control for selection bias) in order to establish treatment effectiveness (Hollon, 1996; Howard et al., 1995a).

Efficacy studies transferred to the real world setting to be used as protocols for treatment may be problematic. One criticism of transferring results from the laboratory to the clinic is that clients chosen for efficacy studies are not representative of clients seen in the typical clinic setting. Clients for efficacy studies are selected because their disorder is specific (i.e., phobia or obsessive-compulsive disorder) and they do not have other confounding conditions, such as depression or family and marital problems. This type of problem specificity is often not found in the real world of the mental health clinic, where clients expect help with a multiplicity of problems (Barlow, 1996).

A second criticism is that efficacy studies use manualized, highly structured interventions, whereas in a clinic setting, psychotherapy is often more flexible, adapting to the needs of clients with multiple problems (Goldfried & Wolfe, 1996). Therapists in practice may find it frustrating and ineffective to try to confine their interventions to a manualized treatment protocol with clients who have multiple problems and may find it especially difficult if the treatment does not conform to their preferred theoretical orientation.

These real world conditions may contribute to the finding that the protocols developed for efficacy studies do not transfer well to the clinic. For instance, a meta-analysis of family psychotherapy analyzed 64 efficacy studies with random assignment and 36 effectiveness studies using non-equivalent group designs. The analysis found significantly larger effect sizes

for efficacy studies than for effectiveness studies. One explanation for the difference is that the effectiveness studies have less control over error variance than efficacy studies because of selection procedures for both clients and clinicians, thus contributing to smaller effect sizes (Shadish, 1993). By controlling for the error variance therapists actually face in a clinic setting, efficacy studies may overestimate the effect of the treatment.

On the other hand, at least one study demonstrated a higher rate of clinical success for clinically-flexible vs. research-structured marital therapy (Jacobson, Schmaling, Holtzworth-Munroe, Katt, Wood & Follette, 1989). This study argues for the superiority in the real world of a more flexible approach.

Both types of methodology are useful, with efficacy studies specifying the types of interventions that improve clinical outcomes (usually manualized for internal validity); dosage (number of sessions); and interactions between treatments and types of patients or therapists. Effectiveness studies help to transfer this knowledge to the real world of the clinic, where conditions cannot be so well controlled.

Utilization of Psychotherapy Research in Policy Decisions.

Providers are troubled by the failure of managed care companies to consider the real world conditions of therapy when determining session limits and by the failure of these companies to utilize ongoing information regarding treatment progress in determining treatment modifications or extensions (Newman & Tejeda, 1996). If managed care organizations and clinicians are to benefit from contemporary research efforts, it is especially important to move from outcomes assessment to outcomes monitoring. This means that

clinical outcomes should be assessed periodically during the course of therapy, with the results communicated to the clinician for use in ongoing treatment planning. In addition, profiles can be developed for patients, providers, and sites. (Burlingame, Lambert, Reisinger, Neff & Mosier, 1995; Howard, Brill, Leuger, O'Mahoney, & Grissom, 1995b); Sperry, 1997). All of the stakeholders in patient care, including the patient and the family, the employer and the public, the managed care or insurance company, and the clinician, are interested in assessing the ongoing process of treatment effectiveness.

Approaches to Treatment Outcomes Measurement and Management

One well-developed approach to treatment outcomes assessment and management has been the work of Howard's group at Northwestern University (Newman & Tejeda, 1996). This group has proposed the dosage and phase models of psychotherapy. The dosage model of psychotherapeutic effectiveness posits a linear relationship between the log of the number of sessions and the normalized probability of patient improvement. This relationship has been demonstrated to persist with various symptoms and syndromes (Howard, et. al., 1986; Horowitz, et al., 1988; Howard, et al., 1993; Kadera, et al., 1996; Kopta, et al., 1994; Maling, et. al., 1995; Pilkonis & Frank, 1988; Seligman, 1995; Simons, et al., 1995). The theory is not consistently supported, however. Recent studies of clinical outcomes for children's mental health services have failed to support a dose-related affect when other quality measures, such as the therapeutic relationship, parent involvement, and satisfaction with services, were partialled out (Bickman et al., 1995; Bickman, Summerfelt, & Noser, 1997; Noser & Bickman, 2000).

Analysis of this dosage model led to the development of a three-phase model of the change process that occurs in psychotherapy. “Remoralization” is the first phase of psychotherapy, addressing the patient’s demoralization and feelings of frantic hopelessness and desperation. Demoralization responds quickly to psychotherapy, and remoralization is usually accomplished in a few sessions. The second phase of therapy is termed “remediation” and has as its goal the attainment of symptom relief by refocusing the patient’s coping skills. This goal is attained more gradually and typically requires about 16 sessions. The third phase is termed “rehabilitation” and refers to unlearning troublesome, maladaptive, habitual behaviors, and establishing new ways of dealing with various aspects of life, such as relationships, work, and trouble-causing personal attitudes (Howard et al., 1993; Kopta et al., 1994).

Howard, Lueger, et al. (1993) demonstrated that these three phases are probabilistically, sequentially, and causally dependent, moving from the first through the third phase. The outcome measures devised for these phases are 1) subjective well-being, 2) symptoms, and 3) life functioning, respectively. The scales are summed to form an overall treatment criterion, the Mental Health Index (MHI), which has demonstrated reliability and discriminates between a clinical and non-clinical population (Howard et al., 1995a, b; Sperry et al., 1996).

Another approach has been developed by Lambert’s group at Brigham Young University (Burlingame, Lambert, Reisinger, Neff, & Mosier, 1995; Lambert & Brown, 1996). They have designed and tested an instrument to be repeatedly administered during the course of treatment and at termination to measure patient progress. Based on Lambert’s (1983)

conceptualization, the instrument measures three dimensions: 1) subjective discomfort (intrapsychic functioning), 2) interpersonal relationships, and 3) social role performance. The instrument is sensitive to change, using standardized scales and cut-off scores as well as a reliable change index to determine clinically significant change (Jacobson & Truax, 1991). Individual client progress can be graphically displayed to the clinician immediately for treatment planning, and data are also available for studies of psychotherapeutic effectiveness (Burlingame et al., 1995; Kadera, Lambert, & Andrews, 1996; Lambert & Brown, 1996).

These theories of change and approaches to measurement offer advantages to clinicians and other interested stakeholders because of the relevance and practical implications for many different client problem areas or diagnoses and for all treatment theories and techniques. Although discussions regarding the implementation of outcomes assessment in practice have been ongoing of late, very few studies of the process have been done, and, in particular, no studies were found that related to the typical outpatient therapy caseload consisting of adults with depression, anxiety, and/or family problems (Bickman et al., 2000; Eisen & Dickey, 1996; Speer & Newman, 1996). Researchers have been cautioned that implementation of such outcome assessment systems in practice is a complex organization task (Smith, Fischer, Nordquist, Mosely, & Ledbetter, 1977). As these systems are implemented, results in terms of client and clinician satisfaction and clinical outcomes must be assessed. Policy makers and payers may want to base treatment decisions on outcomes monitored concurrent with treatment, as there have been no studies that have shown consistent predictors or moderators of clinical outcomes (Noser & Bickman, 2000).

Domains of Mental Health Care Outcomes

Outcome domains that are commonly assessed in program evaluation research relate to the efficacy and cost-effectiveness of mental health services. Ware (1995) suggests that the health care database contains two major conceptual areas – the health care system itself and personal health outcomes. Ware cautions researchers and the public as well to emphasize the reliability, validity, and strengths and weaknesses of the measures that are used so that results are not misinterpreted. He is concerned that comparisons between plans will be made inappropriately on measures that are not comparable and that unbiased third party evaluations will be replaced by managed care company self-reports that use biased data favoring the reporting company.

Several “report cards” for mental health services have been developed and are reviewed in a document prepared by the U.S. Department of Health and Human Services (Robinson, 1996). The three report cards reviewed have been developed by 1) the National Committee on Quality Assurance (NCQA) – the Health Plan Employer Data and Information Set (HEDIS), Medicaid Adaptation, 2) the American Managed Behavioral Healthcare Association (AMBHA) – Performance Measures for Managed Behavioral Healthcare Programs (PERMS 1.0), and 3) the Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Mental Health Services (CMHS) – the Mental Health Statistics Improvement Program (MHSIP). Each of these report cards evaluates plans on measures of access to care, appropriateness of care, and outcomes of care (Robinson, 1996). Measures of access and appropriateness are beyond the scope of this study. However, measures of outcomes of care will be reviewed.

The HEDIS recommendations, adopted in February, 1996, do not use outcome measures, but rely on statistics regarding hospital readmittance or admittance following ambulatory care to assess quality (National Committee for Quality Assurance, 1995). The PERMS 1.0 measures also do not include outcomes measures per se, although they do include a consumer satisfaction measure (American Managed Healthcare Association, 1995). Only the MSHIP report card includes measures of outcomes commonly assessed by psychotherapy researchers, including physical health, psychological health (reduced symptomology and increased self-esteem), level of independence (reduced impairment from substance abuse, increase in productive activity, increased capacity for independent community living, increase in independent functioning, reduced involvement in the criminal justice system), participation in self-help activities, minimal recurrence of problems, positive changes in areas for which treatment is sought, and social relationships (Center for Mental Health Services, 1996). These report cards represent a first step toward voluntary quality assurance by managed behavioral healthcare organizations.

Assessment of the Economic Benefits of Mental Health Care

In the current climate, mental health care must prove itself to be cost-effective as well as efficacious. Payer's reimbursement policies have established standards of "medical necessity" for mental health services, which determine eligibility for mental health care and the criteria for termination of those services. Payers also determine the level of care and the type of services to be provided. Therefore, it is important that the criteria payers use for decision making optimize efficacy and cost-effectiveness.

Many theorists have suggested outcome domains of interest in establishing the cost-effectiveness of mental health services or health services in general. Kaplan (1990) makes a cogent case that behavioral health outcomes are the primary outcomes of interest and specifies “life expectancy” and “quality of life” as the only important health outcomes. In Kaplan’s view, biological and physical events are only important as mediators of these behavioral outcomes, and he suggests a refinement of behavioral health measures to be used in studies of health and medicine.

One of the purposes of measuring outcomes is to try to develop a ratio of the costs of care to the results of care. The theories and technologies of these cost-based analyses incorporate methods of econometrics, and several types of analyses have developed, including cost-benefit analysis, cost-effectiveness analysis, and cost-utility analysis (Miller & Magruder, 1999). Krupnick and Pincus (1992) identify “cost-effectiveness” analysis as a technique that compares the “costs” and “effects” of a program or intervention wherein “costs” and “effects” are expressed in different measures. In contrast, “cost-benefit” analysis also compares the cost of interventions and resultant effects, but expresses all costs and effects in the same units, usually monetary. These costs are either direct costs, such as actual dollar expenditures in providing care, or indirect costs, such as the value of productivity lost due to disability or death. Cost-benefit research poses many problems for the social science researcher, such as translating the outcome data obtained on measures such as community and family burden into economic terms. Also, there are questions regarding the adequacy of measures of domains such as work productivity, where employers, teachers, or supervisors do not verify the accuracy of self-reports.

For that reason, cost-effectiveness studies have dominated health care. Costs may be either direct or indirect and include such categories as mental health care, physical health care, use of other services, family and informal care, lost productivity, and research costs (Hargreaves, Shumway, & Hu, 1999). Krupnick and Pincus (1992) recommend that psychotherapy outcome studies routinely include cost data in order to begin to define cost-effectiveness and that researchers continue to refine instruments for cost-effectiveness studies. Outcome domains frequently evaluated by psychotherapy cost-effectiveness researchers include: 1) psychological signs and symptoms; 2) functional capacities, including a) self-care, b) social and caretaker functioning, c) worker turnover, job loss, productivity, creativity, earnings, morale, satisfaction, and d) school attendance, grades, and appropriate behavior; 3) physical health signs and symptoms; 4) medical utilization; 5) social and legal system involvement; 6) self-esteem; 7) substance use; 8) satisfaction with services, and 9) direct and indirect costs of services (Dornelas, Correll, Lothstein, Wilber & Goethe, 1996; Krupnick & Pincus, 1992; Sperry, 1997).

Cost-utility analysis is perhaps the most recently evolved approach and thus less frequently reported. In cost-utility analysis, costs reflect the economic costs of the health care resources that capture all the impacts of the health intervention including burdens placed on family and employer, the judicial and social welfare system, and the health care system. The denominator of cost-utility analysis is measured in terms of quality-adjusted life years, which include reports on multiple dimensions such as physical function, role function, social-emotional function, housing, use of leisure time, legal issues, employment, income, and overall satisfaction. There are many challenges to this type of analysis, including the development of

quality of life measures that are reliable, valid and appropriately normed. Currently, the technique is in its infancy (Kamlet & Kleinman, 1999).

Although this field of study has many challenges, it is likely that psychotherapy researchers will continue to produce and develop appropriate cost-based analyses of the effects of various mental health services and technologies in order to demonstrate the worth of services to the various stakeholders in mental health care.

Assessment of Provider Outcomes

Few issues have generated as much controversy among the stakeholders in mental health services delivery as managed care. Lazarus (1995) noted that a literature search revealed 1, 892 articles on managed care in the professional literature between 1987 and 1993 (Lazarus, 1995). Views are passionate, and range from a rather benevolent and positive assessment to malevolent disdain. Some reviewers suggest that managed care can provide the least restrictive level of care necessary to meet patient needs, return patients as quickly as possible to the community (Trugerman, 1996), and encourage the most effective care of the patient, in the best setting, by the most appropriate professional (Lawrence, Mattingly, & Ludden, 1997). Others see managed care as the “corpse in the living room” (Pipal, 1995, p. 323), “a growing crisis and a national nightmare” (Karon, 1995, p.5), and “a euphemism for social control in the healthcare arena” (Shapiro, 1995, p.443).

Mental health services’ evolution over time has been shaped in part by the economic and political forces at work influencing the delivery of services (Bennett, 1993; Shore & Biegel, 1996). Virtually every mental health practitioner has had to change aspects of his or

her practice in response to the cost containment strategies of managed care. There are indications that these changes in service delivery initiated by the managed care movement have often adversely affected practitioners.

A recent survey of psychologists found that practitioners' incomes and their number of clients are decreasing (Burnette, 1996). Some prognosticators believe that the future will see fewer and less trained practitioners (Geller, 1996; Moldawsky, 1995). Because a strategy often employed by managed care is to replace higher cost professionals with lower cost (and less trained) professionals, psychiatrists may be replaced with psychologists, psychologists with social workers or other masters-level practitioners, and masters-level clinicians with bachelor-level nurses or mental health technicians (Lazarus, 1994).

Practitioners have seen their decision-making autonomy disappear with the advent of third or fourth party review. Many practitioners deeply resent having their recommendations second guessed by reviewers whom they believe are less well trained than they, less experienced clinically, and less familiar with the patient's symptoms and circumstances (Anonymous, 1995; Munson, 1996; Schlesinger et al., 1996).

Practitioners have had to adapt to the forms of treatment and treatment settings preferred by many managed care companies. Cost control efforts initially targeted inpatient psychiatric care, resulting in a decrease in length of stays and an increase in the use of intermediate settings, such as partial hospitalization, day treatment, and residential care (Hodgkin, 1992). Managed care reviewers also prefer short-term treatment approaches in lieu of long-term therapy (Borenstein, 1996; Morris, 1994; Stechler, 1994) and approaches that favor behavioral or cognitive-behavioral theoretical formulations rather than psychodynamic

formulations (Morris, 1994; Welch, 1994). Other cost-saving treatments favored by managed care include group rather than individual treatment (Welch, 1994) and psychopharmacology rather than psychotherapy (Barlow, 1996). Often, managed care reviewers do not authorize extensive psychological or psychoneurological testing (Sweet, 1995). Practitioners complain that these cost-saving strategies, which cut into their incomes, also threaten the quality of treatment (Karon, 1995; Miller, 1996).

Some practitioners have adapted by changing their therapeutic approach, developing niche markets, and marketing their services more aggressively (Buffone, 1992; Fink, 1993). Other practitioners, concerned with the quality of care provided under managed systems, are calling for policies that are more responsive to client needs and guided by research-based protocols, rather than the current emphasis on cost-containment (Barlow, 1994; Brook, 1996; Karon, 1995; Miller, 1994; Pipal, 1994 & 1995).

Practitioners' concerns about quality have also addressed the ethics of managed care. Some practitioners contend that managed care companies have placed cost-containment priorities ahead of the provision of quality care, forcing practitioners to accept barriers to adequate treatment (Borenstein, 1996; Chodoff, 1998; Sabin, 1998).

Concerns have been expressed about the conflict of interest generated when providers take on capitated contracts (McDaniel & Erlen, 1996; Sabin, 1994; Schlesinger, 1997). Capitated contracts may require a practitioner to consider the needs of the entire enrolled population when making treatment decisions and may take the practitioner out of the role of being an advocate for his/her particular patient. Patients may indeed question the recommendations of their provider when they are aware that he or she may benefit financially

from under treating. Legal issues are involved as well, since legal precedent has established that physicians can be held liable for managed care decisions if they have not acted as their patient's agent in appealing managed care decisions that the provider believes are not in the patient's best interest (Higuichi & Newman, 1994; Wickline v State of California, 1987).

Concerns have also been expressed regarding patient confidentiality. Many practitioners believe confidentiality is threatened by third-party review and the increased access to records by non-clinicians such as clerks, who must process the additional paperwork that is required (Corcoran & Winslade, 1994; McDaniel & Erlen, 1996; Pipal, 1995; Sabin, 1997). Practitioners have also concluded that managed care policies violate the principle of informed consent by several overt and covert practices that interfere with patients obtaining relevant information (Green, 1999).

On the other hand, there have been ethical questions raised about practitioners' clinical decisions that may vary as a response to the requirements of systems of care. Diagnosis and treatment planning, for instance, have been found to vary depending on what is considered reimbursable. This has been referred to as "tailoring the chart" so as to obtain maximum benefits. Questions have risen as to who may benefit the most, the client or the clinician (Keefe & Hall, 1999; Melnick, 1999; Shih, 1998; Shore, 1998).

Studies of Practitioner Responses

A few empirical studies have addressed practitioner responses to managed care. An early qualitative research report based on focus group responses of 23 practitioners (60% psychologists, the remainder psychiatrists and one social worker) found the general perception

of managed care to be quite negative. However, there were distinct differences between managed care firms, with some rated much more positively than others. Those that were rated more positively interfered less with the treatment decisions of the practitioner, developed relationships between the practitioner and the reviewer, and did not try to micromanage treatment.

Providers adapted by carefully choosing the plans they contracted with, learning the language of managed care (which could be considered “gaming the system”), and seeing fewer *pro bono* patients. Some providers intended to change their practice styles, others intended to leave practice altogether, and still others felt that the situation would change as managed care firms matured and achieved a balance between cost containment and quality of care (Thompson et al., 1991).

An analysis of a national survey of psychiatrists in 1988 looked at the effects of physician characteristics on their bargaining power when managed care companies and hospitals attempted to put constraints on the physician’s practices (Schlesinger et al., 1996). The researchers identified changes in health care such as utilization review and prospective payment that resulted in both direct and indirect effects on physician autonomy. They hypothesized that physician’s bargaining power will be weaker if 1) they have been in practice a relatively shorter length of time and do not have an established pool of patients, 2) they are female, since women are less likely than men to achieve well-compensated positions in the medical profession, and 3) they have been trained in a medical school outside of the United States, since this restricts the sorts of positions that tend to be available to them. In addition, they hypothesized that those psychiatrists with a relatively high rate of compensation would

report more frequent constraints, and those psychiatrists with only one hospital affiliation would resist constraints imposed by the hospital more strenuously, since they had no recourse to alternative hospitalization facilities.

The results supported the hypotheses, and the researchers concluded, "Constraints on psychiatrists' practices are widespread, emanating from both hospitals and insurers. It appears that the ability of physicians to resist these constraints depends on both their bargaining power and their motivation for resisting a loss of autonomy" (Schlesinger et al., p. 259).

A study of 43 mental health professionals (20 Ph.D. psychologists, 1 psychiatrist, 12 MSWs, 4 psychiatric nurses, and 5 MA-level family therapists) working in staff model HMOs in the northeast United States was undertaken by Austad et al. (1992). The researchers asked open-ended questions regarding therapists' opinions about their HMOs' benefit package, their job satisfaction, their graduate school preparation, and the evolution of their practice style since joining the HMO. Results suggested that practicing in the HMO required adaptation, with therapists adjusting to the demand characteristics of the job by adopting eclectic, short-term, problem-solving and directive practice styles. Although they reported vulnerability to burnout due to the heavy caseloads and crisis intervention, they also reported improvement in their level of confidence, perceived therapeutic effectiveness, and perceived competence overall. They developed strategies to avoid burnout, such as obtaining interpersonal support and setting limits on practice hours.

Gold and Shapiro (1995) surveyed a random sample ($N=142$) of Florida licensed psychologists in private practice. Results indicated that 73% of these psychologists were affiliated with at least one managed care organization. Contrary to other reports, these

managed care (MC) affiliated practitioners reported significantly higher annual practice incomes than non-managed care (NMC) affiliated practitioners. A second analysis was conducted for full-time practitioners only, since these practitioners were more likely to be MC affiliated. Differences in service hours provided and annual practice income between MC and NMC practitioners remained significant, with 71% of the full-time MC practitioners and 44% of the full-time NMC practitioners reporting incomes over \$60,000. In addition, MC and NMC practice styles were different, with MC psychologists significantly more likely to report seeing clients for fewer sessions, having a cognitive/behavioral orientation, and providing more child, couples, and family therapy, as opposed to individual adult therapy.

Another study conducted in Dallas and Tarrant counties in Texas surveyed 86 psychotherapists; 40 licensed counselors, 24 licensed psychologists, 6 practitioners with other licenses, 14 with multiples licenses, and 2 who did not report their license status. They were surveyed on satisfaction and burnout and compared on setting (private practice vs. public) and gender. Gender differences were significant. Results indicated that for the 36 males completing the survey, a higher percentage of managed mental health clients was significantly associated with lower levels of satisfaction and higher levels of burnout on most of the measures. For females, however, there was no association between the percentage of managed mental health clients and satisfaction and burnout levels. Practice setting differences were also significant, with private practitioners in general reporting higher levels of satisfaction and lower levels of burnout than public sector employees (Dupree & Day, 1995).

In Iowa, psychologists were surveyed regarding their reactions to a Medicaid managed care initiative (Russell et al., in press). Although psychologists were generally dissatisfied,

rating the managed care system significantly lower than the previous fee-for-service system, those who practiced in community mental health centers were less dissatisfied than those who practiced in other settings and were more likely to become approved providers. Psychologists surveyed seemed to adapt to the managed care system over time, as a follow-up survey conducted a year after the initiation of the managed care program indicated a marginally more positive rating. However, psychologists who were not treating Medicaid patients one year after the initiation of the managed care program reported higher levels of autonomy and job satisfaction than those who were treating Medicaid patients.

In Summary, results from these studies do not suggest clear-cut conclusions. It appears that under some circumstances, practitioners can adapt to managed care initiatives and change their practice styles accordingly, actually increasing their sense of accomplishment and their incomes as well. Other practitioners have indicated decreased autonomy, job satisfaction, and income with the advent of managed care. Provider responses appear to be related to the specific setting, the managed care strategies used, and even the gender of the provider. Provider responses to the management systems under which they operate may have effects on the care they provide, which would in turn, affect patient outcomes. Therapist characteristics have been found to be significant predictors of treatment outcomes (Krupnick, Sotsky, Simmens, Moyer, Elkin, Watkins, & Pilkonis, 1996), and it follows that a therapist's evaluation of the management system would have effects on the quality of his/her work.

Moving From Outcomes Measurement to Outcomes Management.

It has been recommended that outcome assessment systems move from outcomes measurement, characterized by pre-post designs, to outcomes monitoring, characterized by feedback to clinicians regarding progress, and finally to outcomes management, characterized by a system of profiling patients, providers and sites (Howard, Orlinsky, & Leuger, 1994; Sperry, 1997). However, it is not known whether outcomes monitoring adds to the effectiveness of psychotherapy as ordinarily practiced. According to psychotherapy researcher Michael Lambert, the developer of the Outcome Questionnaire (OQ-45), a clinical outcome instrument used in this study, no studies have been done using a standardized measure of client outcomes as feedback and randomly assigning clients to feedback or no-feedback conditions (personal communication, July, 1999).

Although feedback has long been a bulwark of supervision and clinician training in all mental health professions, there has been surprisingly little research on the processes and outcomes of feedback itself. For instance, it is not known what methods and styles of feedback are most conducive to the development of competent psychotherapists (Henderson, Cawyer, & Watkins, 1999). The primary content of feedback for clinician training has been processes of therapy, such as clinician expressions of empathy, indications of accurate perception of client emotional states, and the proper use of therapy techniques (Smith, Mead & Kinsella, 1998; Landis & Young, 1994; Williams, 1994). Feedback based on client outcomes is rare, and those that have been conducted, primarily in the field of organizational behavior, have combined process and outcome feedback, thus creating difficulties in

disentangling the effects of the two types of feedback (Arco, 1997, Born & Mathieu, 1996; Johnson & Frederiksen, 1983; Karl, O'Leary-Kelly, & Martocchio, 1993).

There are theories that would seem likely candidates to specify the mechanisms whereby outcomes feedback could produce changes in the therapist-generated processes of therapy, which, in turn, could lead to changes in client outcomes. Self-efficacy theory maintains that performance feedback is a source of efficacy expectations (belief in one's ability to accomplish a task), and this belief, in turn, leads to better performance (Bandura, 1982, 1997). Other theorists have suggested that preservation of self-concept (or authenticity) and self-esteem can provide the motive for change when an individual is presented with feedback (Jones, 1982; Kaplan, 1982; Gecas, 1986). The concept of learning from results has been affirmed in various educational studies as well, though these studies have paid little attention to motivation (Buekers, Magill, & Sneyers, 1994; Guadagnoli, Dornier, & Tandy, 1996; Guay, Salmon, & Lajoil, 1997).

A recent study demonstrated that feedback to primary care physicians can improve performance on quality measures, and that these physicians generally had a high level of acceptance of the quality assurance program (Palmer & Hargraves, 1996). A thorough examination of the possible mediators of the effects of feedback to clinicians on client outcomes is beyond the scope of this study. The first step is to evaluate the existence of such an effect, so it was hypothesized that feedback to psychotherapy practitioners would lead to improved results for clients, presumably through improvements in psychotherapy practice.

Motivation remains an important consideration, however. In addition to the cognitive mediators specified above as motivators, rewards such as financial compensation can also

motivate through the expectancy that a valued reward will be forthcoming (see Bandura, 1997). However, if treatment decisions are made by the management system, the hypothesized positive effect of feedback may be precluded, since the practitioner has little autonomy and must operate under management system constraints. Management systems may have established policies that designate type of therapy, therapist, or dosage of therapy that are not responsive to individual client characteristics, therapist characteristics, or client responses to the therapy process. Conversely, if clinicians are operating under management systems that compensate on a fee-for-service basis, there will be financial rewards in proportion to the amount of therapy delivered. Another consideration is the possibility that the deadlines imposed by session limits could motivate both clinicians and clients to work harder to produce positive results in the limited time available to them. In other words, there may be forces other than the clinician's judgment and assessment of best practices that determine the dosage and intensity of therapy delivered. Therefore, improvements on the outcome measures hypothesized as a result of feedback to clinicians could be moderated by management system variables, UR or no UR, that are part of the ecology of mental health services delivery. This is an unexplored area of clinical delivery and subject to multiple cognitive and motivational mediators, thus the hypotheses that were established must be considered tentative.

Significance of this Study

As evaluations of public managed mental health care have shown, management systems can save payers money. However, further research is needed to determine the cost-effectiveness of these management system strategies. Little is known about the effects on treatment outcomes such as symptoms, functioning, productivity, and utilization of services. A review of the literature suggests that much of the cost savings demonstrated by managed mental health care results from reductions in in-patient hospitalization days.

Managed care cost-saving strategies, primarily session limits, applied to outpatient therapy may not be as cost-effective if reducing the use of outpatient mental health results in lost productivity, increased community services utilization, increased medical utilization, increased likelihood of inpatient mental health care, and increased subjective distress. Many of these costs may be borne by other service sectors, family members, or the community at large. If session limits are so restrictive that clients are discharged before sufficient gains have been made in symptoms and functioning, then a method for judging progress in therapy to determine the appropriate timing for discharge would be much more cost-effective than the current, usually arbitrary, session limit impositions.

This study examined the effects of a clinical feedback system, comparing the outcomes of patients whose clinicians receive feedback to those whose clinicians did not. The study also examined the moderating effects of care management systems, comparing clients whose treatment was managed by UR to those with non-managed care on measures of treatment outcome and response to the feedback system. In addition, the number of sessions was analyzed as a predictor of outcome to assess a dose-related effect. If fewer sessions were

provided for managed care patients, the effect of imposing this UR technique on outcomes would be determined. Also, Center staff evaluated the managed care plans on several relevant factors, including UR techniques. Since it is also important that monitoring systems be acceptable to consumers and providers, the staff's response to the feedback system and their assessment of the burden for their clients was evaluated.

The recommendation for moving from outcomes measurement to outcomes monitoring relies on the assumption that monitoring patient progress will assist clinicians in providing appropriate treatment and will improve patient outcomes. Therefore, there is a need to document the effectiveness of providing feedback regarding patient progress to the clinician. Participants in this study were randomly assigned to one of 3 groups; a feedback group, a no feedback group that completed the feedback questionnaire at each session, or a control group that did not complete the questionnaire at each session. The community mental health center that was studied represents a natural experiment, since at this location in the rural Midwest some insurance companies still offer traditional indemnity plans, whereas other plans are incorporating various strategies of care management. Since participants cannot be randomly assigned to insurance plans, their equivalence on important characteristics, such as socioeconomic status, symptoms, levels of functioning, and health status, were evaluated.

Studies have suggested that there are differences between the rural and urban populations seeking mental health services, with rural patients generally exhibiting greater severity of symptoms (Blank, Fox, Hargrave, & Turner, 1995; Hill & Fraser, 1995). Often, rural patients will seek help for their mental health symptoms through primary care physicians, chiropractors, or local healers; or they may be involved with the criminal justice system

(Sullivan, Jackson & Sprintzer, 1996). Obstacles to appropriate rural mental health services delivery include issues of availability, accessibility, and acceptability (Blank et al., 1995; Shelton & Frank, 1995). Therefore, results of studies on rural populations may not be generalizable to urban areas. However, since symptom severity is generally higher and accessibility to services is generally lower in rural areas than urban areas, it is likely that any treatment effects demonstrated in a rural population will underestimate potential effects in an urban population.

A process variable that was investigated is “therapeutic alliance,” defined as the assessment of the therapist and the therapy by the patient. Many studies of psychotherapy processes identify alliance as a nonspecific variable that is significant in predicting outcome (Blatt, Sanislow, Auroff & Pilkonis, 1996; Horvath & Luborsky, 1993; Horvath & Symonds, 1991; Krupnick, Sotsky, Simmens, Moyer, Elkin, Watkins & Pilkonis, 1996; Luborsky, 1994). This variable was evaluated as a predictor of both clinical outcomes and satisfaction with services.

Several studies have suggested that satisfaction with services may be correlated highly with response set variables. Some of these variables have included subject’s attitude toward life in general, self-esteem, illness severity or chronicity, and relationship variables (Barker, Shergill, Higginson, & Orrell, 1996; Hall, Milber, & Epstein, 1993; Marshall, Hays, Sherbourne, & Wells, 1993; Solomon & Draine, 1994). Although some researchers have concluded that treatment outcome is a less powerful predictor of satisfaction with care than patient characteristics and therapeutic alliance, others have found that it depends on the measure of satisfaction. For example, when researchers use specific measures of treatment

satisfaction based on care received, rather than global evaluations of satisfaction with health care, satisfaction with care is not highly correlated with measures of life satisfaction, indicating that response set variables are not responsible for satisfaction (Davies & Ware, 1988; Roberts, Pascoe & Attkisson, 1983; Rubin, 1990; Ware, 1995.)

This study evaluated the effects of both alliance and treatment outcomes on a patient satisfaction measure that was specific to the mental health care received. Although response set may affect alliance as well as satisfaction, response set variables were not specifically evaluated in this study. If satisfaction with services is dependent primarily on the patient's relationship with the provider, then it is possible that alliance may be an early measure of satisfaction. If so, then one would hypothesize that alliance will predict both outcomes and satisfaction with services and that the direct effect of outcomes on satisfaction will be non-significant when alliance is partialled out. This study tested that hypothesis.

An important consideration in cost-effectiveness is the linkage between the clinical effects of psychotherapy – measures of symptoms and functioning – and the distal effects such as productivity and use of services. Although many outcome assessments are not appropriate for a cost-based evaluation, the measures that comprise a useful analysis such as use of services and work productivity can be evaluated in order to provide evidence that economic benefits exist, even though the exact ratio of cost to benefit cannot be determined. This study assessed measures of self-esteem, physical health, work or school productivity, perceived environmental stress, and use of medical, legal, social and community services in addition to the clinical measures of symptoms and functioning. The effect of mental health treatment on these variables was also evaluated.

The study evaluated participants prior to service initiation (Time 1), two months following the intake session (Time 2), and four months following the intake session (Time 3). A two-month time period was selected for the first post-treatment assessment because it would evaluate effects after treatment had been established and a trend in results could be assessed. Some participants had completed therapy, others had dropped out, and others were still engaged in therapy. A follow-up assessment was conducted four months after the initiation of therapy to assess patterns of enhanced treatment effectiveness or deterioration.

As recommended by Cook and Campbell (1979) for quasi-experiments, qualitative information was assessed by conducting follow-up interviews with the mental health center staff. Both quantitative and qualitative evaluations of the management systems and the feedback system were undertaken.

The following hypotheses were tested:

Hypotheses

1. Treatment duration will have a positive curvilinear relationship with clients' clinical outcome measures from T1 to T3 (mental health symptoms and functioning), with the largest gain in therapy occurring from T1 to T2. The preponderance of evidence demonstrates the presence of dosage effects for adult populations. Dosage has been shown to have a curvilinear effect (Howard, et al., 1986), so a curvilinear relationship was expected. The outcome measures less frequently evaluated in the literature and considered to be more distally related to treatment – self-esteem, perceived stress, physical health, service utilization, and the work-related measures – were hypothesized to show a positive linear relationship with treatment.

There is evidence that there are differences in the timing of response to therapy, with constructs considered rehabilitative showing a slower response to therapy (Howard et al., 1986).

2. Outcome feedback to clinicians on client progress will significantly improve client outcomes in comparison with clients whose clinicians do not receive such feedback. This hypothesis is based on the motivation theories of self-efficacy and self-concept preservation. The hypothesis is tentative as there may be moderating factors, such as the reward system established by management for number of sessions, which could not be evaluated in a study of this size.

3. The effects of outcome feedback will be moderated by the management system.

Specifically, feedback will be more effective with non-managed care clients than with managed care clients. This hypothesis is predicated on the assumption that clinician's autonomous decisions will promote therapy efficacy when restrictions on session limits are not in place.

This assumption is supported by clinician critiques of managed care systems.

4. Managed care clients will have fewer sessions than non-managed care clients. The primary mechanism by which the management system will influence treatment outcomes is via dosage (number of sessions.) Dosage, which is influenced by the management system, is expected to be the mechanism by which the management system affects treatment outcomes.

5. Therapeutic alliance will predict both clinical outcomes and satisfaction with services, and the effects of clinical outcomes on satisfaction will be non-significant when the effects of alliance are partialled out.

6. Clinicians will evaluate managed care systems negatively. This hypothesis is based on the preponderance of previous studies that have found negative evaluations of managed care.

7. Clinicians will evaluate the monitoring system positively. A recent study reported that the majority of clinicians would find a measurement system that provided feedback useful if one were available (Noser & Bickman, 2000).

CHAPTER 3

METHODS

Overview

This study has an experimental component within the context of a quasi-experimental design. Randomization was used to assign patients to the feedback conditions, however randomization clearly was not present for the management systems, as patients arrived for therapy already enrolled in a third party payment plan.

Although the provision of feedback to the therapists was manipulated, the provision of the therapy itself was not. Since clients were nested within therapists, a therapist effect was evaluated so that, if present, it could be controlled for by adjusting the error terms. In addition, socioeconomic status and scores on pre-tests were used to test for differences between clients who were assessed at times 2 and 3 and those who were lost to follow-up.

Sample

The sample was selected from patients presenting themselves for mental health therapy at a rural community mental health center. The center provides services in satellite clinics for three counties in Northwest Iowa with a rural population. No city in the area has a population over 7,500, and the total population of the four county area is under 40,000. Eleven therapists with a variety of degrees, clinical disciplines, and years of experience provided mental health services. Both outpatients and therapists were considered participants in this study and signed informed consent forms. Consent was strictly voluntary and could have been withdrawn at any time. The unit of analysis was the individual patient or therapist. Permission to conduct

this study was obtained from the Human Subjects Review Committee at Iowa State University as of 5/10/97.

Initial data were collected on 127 clients; follow-up data were collected 2 months after the initial contact for 75 clients, and again 4 months after initial contact for 59 clients. No statistical differences were found between the 3 sites on any of the measured variables. The average age of the study population was 33.9 years ($SD = 12.36$). The average number of years of education was 12.7 years ($SD = 1.87$), with 88.2% reporting at least a high school education. The average income was \$24,153, with a range from \$0 to \$298,043. Since a few individuals with very high incomes skewed the data, the median income – \$17,549 – is a more appropriate statistic to represent the typical client. Thirty-nine percent indicated they were employed full time, 17% part time, 11% unemployed, 10% students, 8% disabled, and the rest season/occasional workers, homemakers, retired, or other/missing. The average family size was 2.8 individuals ($SD = 1.49$), with a range from 1 to 7. Forty-one percent identified themselves as married, 25% as never married, 22% as divorced, 2% as widowed, and 10% as separated. The vast majority identified themselves as Caucasian (97%).

In terms of symptoms, 67% were diagnosed with a single episode Axis I disorder, such as mild depression, generalized anxiety, or adjustment disorder; 24% were diagnosed with a severe or recurrent Axis I disorder, such as severe depression or recurrent bipolar disorder; and the remainder were diagnosed with psychotic disorders (< 2%), substance abuse (< 1%) or other/deferred (< 6%).

The 11 clinicians, 7 females and 4 males, represented 3 disciplines; 7 were social workers, 3 mental health counselors, and 1 psychiatric nurse. Three had M.A. or M.S.

degrees, 7 had MSWs, and 1 had a BSN. Six were full time (salary based) and 5 were part time (hourly rate). The range of years of experience was from 3 to 30, with a mean of 15.6 years ($SD = 9.38$). Therapists saw between 1 and 49 participating clients.

Prior to the study, a power analysis was conducted to determine the number of participants needed to conduct a repeated measures analysis with 3 within-subjects and 2 between-subjects factors. With 200 participants, approximately 33 per cell, a medium sized effect can be detected with .89 power for the three-level variable, .94 power for the 2-level variable, and .89 power for the interaction. The number of recruited participants was far below this number, and power was not sufficient to detect significance in many of the tests performed.

Measures

Demographic variables. Demographic information for the clients was obtained from the center intake packet and for the therapists from the Clinician Registration Form (see Appendix I).

Socioeconomic status. Socioeconomic status (SES) was estimated by reported family income and education. Family income was a continuous variable representing reported yearly adjusted gross income. Education was based on the number of years of schooling.

Self-esteem. Self-esteem was measured using items from the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979). Response is on a 5-point scale ranging from “strongly agree” to “strongly disagree.” Examples of questions include, “I am a person of worth, at least on an equal plane with others,” “I take a positive attitude toward myself,” and “I do not have much

to be proud of.” Negative items were reversed and the scores were averaged. Research examining the psychometric properties of this scale has reported coefficient alphas ranging from a low of $\alpha = .72$ to a high of $\alpha = .88$ (Gray-Little, Williams, & Hancock, 1997). Test-retest stability has also been reported, with a one-week $r = .82$, a six month $r = .63$, and a one-year $r = .50$. Seven items from the RSE were chosen for this study based on an Item Response Theory analysis of the 10- item scale that indicated items 8, 9 and 10 are slightly less effective in distinguishing among individuals with different levels of self-esteem (Gray-Little, Williams, & Hancock, 1997). The alpha level for this study ranged from .82 to .89. Validity has been well established. The RSE has been used in scores of substantive studies and has been the focus of numerous psychometric evaluations (Dobson, Goudy, Keith, & Powers, 1979; Rosenberg, 1965; 1979; Gray-Little, Williams, & Hancock, 1997). Scores based on these 7 items from a community sample in Iowa of 932 adults ($\alpha = .86$) formed the basis for a comparison between the study sample and a sample of similar non-clinic community members. (See the Pre-and Post-Counseling Questionnaires, Appendix I).

Stress. A series of 6 questions was asked to determine the clients’ perception of their current stress level, scored on a 5-point scale from “strongly agree” to “strongly disagree.” Examples include “I have had a lot of stress lately,” and “I have been emotionally abused.” Reliability analyses for the 3 time points indicated alpha levels between .69 and .79. The scale was designed for this study so no comparative information is available (see Appendix I).

Mental health. Mental health status was measured using two self-report instruments, the Outcome Questionnaire (OQ) and the RAND 36-item Health Survey 1.0 Mental Health

Composite, as well as a therapist rating instrument, the Client Level of Functioning Form (see Appendix I).

The OQ instrument has three subscales with a composite scale comprised of 45 items measured on a 5-point scale from “never” to “always.” The Symptom Distress subscale (SD) is composed of 25 items that measure common symptoms of mental health patients, especially depression and anxiety. Examples include “I feel no interest in things” and “I feel fearful.” The Interpersonal Relations subscale (IR) is composed of 11 items, such as “I am concerned about family troubles” and “I have trouble getting along with friends and close acquaintances.” The Social Role Performance subscale (SR) scale is composed of 9 items, such as “I feel stressed at work/school” and “I am not working/studying as well as I used to.”

For the OQ, the authors report test-retest reliability after 3 weeks of $r = .84$ for the composite score, $r = .78$ for SD, $r = .80$ for IR, and $r = .82$ for SR. Internal consistency was reported at $\alpha = .93$ for the composite score, $\alpha = .91$ for SD, $\alpha = .74$ for IR, and $\alpha = .71$ for SR. The alpha levels for this sample were between .94 and .96 for the composite, .93 and .95 for SD, .80 and .84 for IR, and .68 and .74 for SR. Regarding validity, correlations have been reported with the SCL-90-R (Derogatis, 1983), the Beck Depression Index (Beck et al., 1961), the Zung Self Rating Depression Scale (Zung, 1965), the Zung Self Rating Anxiety Scale (Zung, 1965), the Taylor Manifest Anxiety Scale (Taylor, 1953), the State Trait Anxiety Inventory (Spielberger, 1970; 1980), the Inventory of Interpersonal Problems (Horowitz, Rosenberge, Baer, Ureno, & Villesenor, 1988), and the Social Adjustment Scale (Weissman & Bothwell, 1976). These ranged from .41 to .71 and all were significant at $p < .05$. Sensitivity to change was established by comparing pre-test and post-test scores for

outpatients following seven sessions of psychotherapy; all of the subscales and the composite score indicated statistically significant improvement ($p < .0001$). Construct validity has been supported by comparison of clinical samples with community and undergraduate samples to demonstrate the measure's ability to discriminate between known groups. The overall F-test was significant at the $p < 0.001$ level, and post-hoc comparisons indicated differences between samples that were significant at or beyond the .01 level (Lambert et al., 1996).

A cutoff score was developed by the authors between a community sample and several clinical samples in order to compare treatment outcomes. The cutoff scores are used for comparison purposes and were identified by a line on the graph that provided feedback to clinicians. The formula used to provide this cutoff is:

$$c = \frac{(SD_1)(\text{mean}_2) + (SD_2)(\text{mean}_1)}{SD_1 + SD_2}$$

The RAND 36-item Health Survey 1.0 is composed of 36 items allotted to 8 subscales that are combined into a Mental Health (MH) composite (4 subscales) and a Physical Health (PH) composite (4 subscales). Some of these items are scaled dichotomously on a "yes" "no" basis, some on a 3-point scale, some on a 5-point scale, and some on a 6-point scale. All scales are then recoded to form a scale from 0 - 100. The MH composite includes scales identified as "emotional role functioning," "energy/fatigue," "emotional well-being," "and "social functioning." Each is composed of 2 to 5 items, such as "Have you been a very nervous person?" and "Have you felt downhearted and blue?" Reliability of the MH Composite has ranged from .63 to .85. The reliability for this sample ranged between $\alpha = .76$ to .87. Construct validity has been supported by correlations with the EuroQol (EuroQol

Group, 1996), the COOP/WONCA charts (van Well, 1993), and the Nottingham Health Profile's mental health factors (Hunt, McEwen, & McKenna, 1986) between .41 and .86. This instrument has been used in a variety of health studies in both the U.S. and the U.K. (Essink-Bot, Krabbe, Bonsel, & Aaronson, 1997; Hays, Sherbourne, & Mazel, 1993; Jenkinson, C., Layte, R., & Lawrence, K., 1997; Steward, Hays, & Ware, 1988). Because the OQ composite and the Rand MH composite were correlated at .78, the Total Mental Health score was computed by reversing the scale on the OQ composite and averaging this rescaled score with the Rand MH composite scale.

Ratings of mental health status by clinicians were assessed with the Client Level of Functioning Form (LOF), a research instrument designed to assess the functional capacity of clients by their clinicians on a global rating of functioning, similar to the Global Assessment of Functioning for the DSM-IV diagnostic system, Axis V (personal communication, M Lambert, September, 1997). Functioning is assessed in the following areas: 1) care of self ($\alpha = .74$ to $.97$), 2) living in the community ($\alpha = .89$ to $.99$), 3) social and family interaction ($\alpha = .86$ to $.93$), 4) concentration and work performance ($\alpha = .91$ to $.97$), and 5) impulsive, dangerous or maladaptive behavior ($\alpha = .68$ to $.76$). The scoring ranges from 1 "most or all of the time" to 4 "rarely or never." There is also a single item rating for global assessment, the overall rating of functioning, which ranged from 1 "Persistent danger of severely hurting self or others" to 9 "No or minimal symptoms" (See Appendix 1). The total score reliability in this sample was $\alpha = .92$ to $.97$. The correlations among the LOF scales were between .09 and .95. The correlation between this instrument and the client-reported measures of mental health status was evaluated to determine the agreement between clients and their clinicians.

The instrument correlated at $p < .05$ with the Total Mental Health scores at T3, but was not correlated with these scores at T1 and T2, indicating a lack of agreement between therapist and client. Because the correlations with the patient's reports on the measures of mental status were relatively low, even when significant at the .05 level, this measure was not used to compute the mental health composite score.

Physical health status was measured by the Physical Health (PH) composite of the RAND 36-item Health Survey 1.0. The 4 subscales were "physical functioning," "physical role functioning," "pain," and "general health." The subscales ranged from 2 to 10 items, such as "How much bodily pain have you had during the past 4 weeks?" and "I seem to get sick a little easier than other people." Reliability has been measured as high as $\alpha = .94$, with subscales between .80 and .90. For this sample, reliability was between $\alpha = .84$ and .87, with subscales between .75 and .91. Construct validity has been supported as above, with correlations between .41 and .87 with the EuroQol, the COOP/WONCA charts, and the Nottingham Health Profile's physical health factors (Essink-Bot, Krabbe, Bonsel, & Aaronson, 1997; Hays, Sherbourne, & Mazel, 1993; Jenkinson, C., Layte, R., & Lawrence, K., 1997; Steward, Hays, & Ware, 1988). (See Appendix I).

A review of the literature failed to find a measure of productivity appropriate for this study. Frequently, productivity is measured by counts of productive events, such as attendance at work or school; critical events, such as leaving a job; or number of items produced, such as pieces on an assembly line or number and dollar amount of sales (Jurison, 1997; Koss & Lewis, 1993; Wiley, 1994). The Work/School Questionnaire was developed for this study to assess critical incidents, such as losing a job, being hired for a job, missing

work or school due to health reasons, being late or tardy, or being confronted for poor quality work. Items were either dichotomous “yes” and “no” responses, or a simple count of the number of days of work missed or times confronted for poor quality work. The composite was scored so that higher levels indicate more problems, with a dichotomous response scored either 0 or 1, and the continuously scored responses simply added to the count of the problem area dichotomous responses. In addition, the questionnaire asks for the participant’s estimation of the percentage of productivity he/she has displayed for the past month from 0 to 100%. Since coefficient alpha is not an appropriate measure of reliability for a scale developed by summing counts of critical events, test-retest reliability was assessed at $r < .26$ for the time frames measured. However, correlations were not expected to be high due to the changes expected when therapy was provided. Therefore, sensitivity to change was established by observing changes in scores following the course of psychotherapy. The estimate of percentage of productivity was evaluated separately and was also able to detect changes from the initial to later assessments. The correlation between these two measures of productivity ranged between .06 and .46 (see Appendix I).

Service use is a construct with a short measurement history. Frequently, however, medical expenses have been assessed as an estimate of cost offset for mental health services (Fraser, 1996). Caretaker and community burden have also been assessed by evaluators of managed mental health care (Babigian, et al., 1992). Evaluators have developed instruments for their own studies and few have been widely used. The instrument selected for this study, the AAHB Service Utilization Questionnaire, was developed by the Association for Ambulatory Behavioral Healthcare and has no psychometric data available as yet. It was

developed to assess use of a wide range of services for 1) emotional or psychological problems, 2) alcohol or drug use, 3) physical or medical problems, and 4) legal or social problems. Questions are scored either dichotomously “yes” or “no” or as a continuous measure, such as number of days treated as an inpatient or sessions of psychotherapy. There are 9 questions assessing the use of services for emotion or psychological problems, i.e., “In the last 30 days have you received individual/group or family outpatient therapy or counseling,” with 4 related items measured continuously, i.e., “How many times?” A series of 5 similar dichotomous questions and 3 related continuous questions measured the use of services for alcohol or drug use, i.e. “. . . been in an inpatient or residential treatment facility?” Seven items related to physical or medical problems with 2 continuous measures were similarly assessed, i.e., “. . . seen a physician, nurse, nurse practitioner, or physician’s assistant?” And lastly, 10 dichotomous and 2 continuous items were related to social or legal services, i.e., “. . . used social services such as family preservation, ” or “. . . been arrested.” As in the productivity measure, dichotomous items were scored 0 or 1, and summed along with the continuous items to form the composite measure. Higher scores indicate greater use of services. Since this scale is a sum of counts of incidents, coefficient alpha is not an appropriate measure of reliability. Test-retest reliability was $r < .37$ for the two time frames measured (see Appendix I).

There are several measures of therapeutic alliance that have been used. Some of them assess both the client’s and the therapist’s opinion as to the quality and helpfulness of the therapeutic relationship, such as the Helping Alliance Questionnaire (Alexander & Luborsky, 1986). Others measure only patient self-report, such as the Working Alliance Inventory

(Horvath, 1982) and the California Therapeutic Alliance Rating System (Marmar, Horowitz, Weiss, & Marziali, 1986). These measure, however, are all fairly long, and in an effort to relieve the subject's burden in this study, a shorter assessment instrument was selected, the Outcomes Questionnaire Alliance and Motivation Questionnaire (OQ-AM) developed by psychotherapy researchers Burlingame, Lambert and Nebeker (M. Lambert, personal communication, September, 1997) who also developed the OQ instrument. This measure has not been assessed for reliability or validity as yet. The major content domains of the alliance construct were reviewed by these researchers and used to construct this short 7-item scale. It measures the patient's assessment of the therapist's competency and empathy and the strength of the working alliance, plus the patient's own motivation and positive expectations for the therapy. Internal consistency reliability was assessed for this study at $\alpha = .78$ (see Appendix I).

Patient satisfaction has also been assessed often, and many instruments have been used, such as the Client Satisfaction Questionnaire (SCQ-18; Larsen et al., 1982) and the Patient Satisfaction Questionnaire (PSQ; Ware, Snyder, & Wright, 1976). However, most instruments are targeted to physical health care or to an assessment of the health plan (Marshall, et al., 1996; Roberts, Pascoe & Attkisson, 1984; Weiss & Senf, 1990). Therefore, a newly developed scale was selected for this study that specifically targeted mental health patients. The AABH Patient Satisfaction Questionnaire consists of 27 items that measure patient's satisfaction with services on a 5-point likert type scale ranging from "strongly agree" to "strongly disagree," with subscales measuring satisfaction with 1) the therapy modalities (individual, family, group, etc), 2) the outcomes of therapy, 3) the dose and intensity of

therapy, and 4) the therapist, services, office staff, and global satisfaction. Examples include “Staff treated you with respect” and “The services you received were worth the time and money.” Other examples are “How helpful was individual therapy” with responses ranging from “very helpful” to “harmful.” The measure was evaluated for internal consistency reliability and, since few clients were seen for family or group therapy, only the individual therapy evaluations and evaluations of services were included in the composite for a total of 19 items with an $\alpha = .86$ at T2 and $.83$ at T3. Validity was supported by a correlation between the satisfaction measures and the alliance measure of $r = .26$ ($p < .06$) at T2 and $.48$ ($p < .01$) at T3 (see Appendix I).

Dose was established by a count of the number of sessions from T1 to T2 and from T1 to T3.

The therapists were asked to evaluate managed care with the Managed Care Questionnaire developed for this study. A literature search identified cost-saving strategies and mechanisms used by managed care programs and issues that providers have identified as problematic in reaction to these strategies. A meeting was held with the center staff to determine the management issues that were salient for them. The Managed Care Questionnaire was developed using the content areas that were identified as applicable to the study population (see Appendix I). Responses were on a 5-point scale from “strongly agree” to “strongly disagree.” Answers to each question were scored separately for this report because each addresses an important component of managed care. Responses were also averaged to form a composite, but since there were so few respondents, psychometrics cannot

be considered to be reliable. An open-ended question allowed therapists to anonymously add additional comments, and a focus group meeting elaborated further.

The Provider Satisfaction Questionnaire was developed to assess staff evaluation of the feedback system and was given to the staff prior to the focus group that was held to gather more qualitative information. Seven items assessed clinicians' response on a 5-point scale from "strongly agree" to "strongly disagree." As in the managed care evaluation, after recoding so that a higher response represented a more positive evaluation, each item was averaged, along with the composite. An open-ended question for comments was also included. Feedback mechanisms such as the OQ system are new to the mental health field. Therefore it was appropriate to conduct qualitative research to determine reactions to the system's introduction (see Appendix I).

Procedure

Individuals who contacted the Center requesting services were informed about the study and asked to participate. The office staff was appraised of the study in a staff meeting conducted by the researcher and were given a memo which suggested a format to describe the purpose and benefits to potential participants. Clinicians also attended the staff meeting and were given a similar memo describing the benefits to the patient, the center, and the staff. Clinicians were assured that no analyses comparing clinicians would be conducted and that clinicians would be aggregated for purposes of the study. All participants, both clients and clinicians, signed consent forms.

After consenting to participate, clients were asked to complete initial questionnaires and were informed that they may be asked to complete forms periodically throughout their treatment. They were asked to indicate if and how they were to be contacted for follow-up if they were no longer coming for therapy during the follow-up periods. Clinicians completed the Clinician Registration Form and the questionnaire related to client functioning at the initial time period.

Clients were randomly assigned by case number to either the control condition for case numbers ending in 3, 6 or 9, or one of the feedback conditions. Clinicians were randomly assigned to either a feedback or no feedback condition. The three conditions were: 1) a feedback condition, in which the clients completed the QQ at each session, and the clinicians were provided with information regarding client progress following each session; 2) a no-feedback condition in which clients completed the QQ at each session, but the clinicians were not provided with the results of the measures; and 3) a control condition in which clients were not assessed with the QQ measures at each session. Providing for a no-feedback condition allowed for an analysis of the effects of the repeated test taking on outcomes. It is possible that repeated test taking could produce therapeutic effects that would confound the results and not ensure the construct validity of the treatment, that is, the provision of feedback to clinicians (Cook & Campbell, 1979). Thus, there were two clinician conditions, with clinicians in either feedback condition seeing clients in the control condition also, and three client conditions.

Clients whose therapists were in the feedback and no feedback conditions completed the OQ at every session. The instrument could be completed in about 5 – 10 minutes for most clients. For clients whose therapists were in the feedback condition, the OQ instruments (with clients identified by case number) were mailed to the researchers each week. The graphical results of the client's scores on the total OQ score, as well as the subscales, compared with the community cut-off points were then returned by mail to the center office and given to the therapist prior to the next session. (See Appendix II for a sample of the OQ feedback reports to therapists.)

At the intake session, the client was asked to complete: 1) the center intake forms; 2) the study consent form; 3) the Pre-Counseling Questionnaire; 4) the OQ, 5) the RAND Health Survey 1.0, 6) the Work/School Questionnaire; and 7) the AAHB Service Utilization Questionnaire. Clinicians were asked to complete: 1) the staff consent form, 2) the Clinician Registration Form, 3) the Client Level of Functioning form. During therapy, clients were asked to complete the OQ at each session for the feedback and no feedback groups. The battery of questionnaires could be completed in about 30 – 45 minutes. Clients were reimbursed \$5 for each complete assessment at Times 1, 2, and 3. The clinicians were asked to complete the Client Level of Functioning form and DSM-IV diagnoses. After completion of the 3rd session, all clients were asked to complete the OQ-AM, which assesses the therapeutic bond and client motivation for change.

Clients were assessed two months after the Intake session (Time 2), and again in another two months (Time 3). Clients who were no longer attending therapy were sent a packet of the instruments and a letter requesting their continued participation. Follow-up

phone calls were made if the client indicated his/her consent to phone calls on the consent form. If not, a follow-up postcard was sent in one week, and a follow-up mailing including forms was sent in another week to non-responders.

For the two-month and the four-month assessment, the client was asked to complete the Post-Counseling Questionnaire, the OO, the RAND Health Survey 1.0, the Work/School Questionnaire, the AABH Service Utilization Questionnaire, and the AABH Patient Satisfaction Questionnaire. The clinicians were asked to complete the Client Level of Functioning form. If the client had not been seen in therapy between the 2nd and 3rd follow-up, clinicians were not required to complete the evaluation for the 3rd follow-up. In addition, six months after the study ended, therapists were asked to participate in a focus group regarding their participation in the study. Prior to the focus group, clinicians were asked to complete the Managed Care Questionnaire and the Provider Satisfaction Questionnaire. Quantitative information on these instruments was assessed prior to the focus groups in order to identify topics to discuss in the group and to encourage the staff to initiate discussion regarding the content domains of interest to them.

The focus groups began with a grand tour question for each area of interest: 1) “What has it been like for you to work under managed care as compared to fee-for-service (or non-managed care)?” 2) “What are your reactions to the feedback system you have been using to monitor patient progress?” Questions were asked regarding the content areas specified on the quantitative instruments, as well as descriptive, structural and contrast questions to expand the content areas and the range of responses (Brotherson, 1994; Joanning & Keoughan, 1996).

CHAPTER 4

RESULTS AND DISCUSSION

Descriptive Statistics

Descriptive statistics for both clients and therapists were summarized in the earlier description of the sample. Approximately 22% of eligible clinic patients agreed to participate in the study. Demographic information collected by the center on their clients was compared with the study sample. Fewer study participants were over age 65 (3% for the study sample; 10% for the center). The study sample was 72% female, whereas the center statistics identify 58% of their clients as female; however, the statistics reported by the center included individuals under age 18 (25% of clients). Tables 1 and 2 compare the sample on demographic characteristics by condition and by managed care enrollment.

As can be seen in Table 1, even though randomization of therapists to the feedback conditions and clients to the control and experimental conditions was performed, the cells were unbalanced, and there was a significant difference between the assigned treatment groups on the initial measure of mental health status, the Total Mental Health composite. Individuals in the control condition scored significantly lower than both of the treatment conditions. This initial measure was used as a covariate in the analyses of treatment effects as a statistical method of controlling for nonequivalent groups.

It is problematic that the individuals in the Feedback condition far outnumbered the individuals in the No Feedback condition. One possible explanation for that difference is

Table 1. Demographic and Mental Health Status of the Experimental and Control Conditions

| Characteristic | Means | | | Test statistic | p |
|-------------------------|----------------------|----------------------|----------------------|---------------------------|-----|
| | Control | Feedback | No Feedback | | |
| n | 38 | 66 | 23 | | |
| Age | 37.50 (14.32) | 32.14 (10.51) | 32.91 (13.36) | $F(2,124) = 2.41$ | .09 |
| Education | 12.63 (1.63) | 12.52 (1.91) | 13.35 (2.06) | $F(2,124) = 1.75$ | .18 |
| Mental Health Status T1 | 66.41 (17.98) | 74.23 (20.37) | 79.77 (23.49) | $F(2,124) = 3.40$ | .04 |
| Income ^a | \$20,403 (13,690) | \$28,404 (43,988) | \$16,866 (12,320) | $F(2,99) = 0.98$ | .38 |
| % Married | 47 | 44 | 22 | $\chi^2(2, N=127) = 4.40$ | .11 |
| % Work full time | 34 | 42 | 26 | $\chi^2(2, N=127) = 2.14$ | .34 |
| % Female | 68 | 77 | 65 | $\chi^2(2, N=127) = 1.68$ | .43 |

^a Some respondents refused to answer the income question, thus the sample size for the conditions was Control n = 34; Feedback n = 54; No Feedback n = 14. Standard Deviations are in parentheses

Table 2. Demographic and Mental Health Status of the Managed Care Groups

| Characteristics | Means | | Test statistic | p |
|-------------------------|----------------------|----------------------|---------------------------|-----|
| | Non Managed Care | Managed Care | | |
| n | 69 | 58 | | |
| Age | 36 (14.28) | 31 (9.03) | $t(125) = 2.12$ | .03 |
| Education | 12.72 (1.81) | 12.67 (1.95) | $t(125) = 0.16$ | .88 |
| Mental Health Status T1 | 72.18 (20.37) | 73.74 (21.18) | $t(125) = 0.42$ | .68 |
| Income ^a | \$29,469 (41,399) | \$17,145 (16,292) | $t(100) = 1.87$ | .07 |
| % Married | 49 | 31 | $\chi^2(1, N=127) = 4.34$ | .04 |
| % Work full time | 45 | 28 | $\chi^2(1, N=127) = 4.07$ | .04 |
| % Female | 63 | 72 | $\chi^2(1, N=127) = 5.69$ | .02 |

^a Some respondents refused to answer the income question, thus the sample size for the conditions was Non Managed Care n = 58; Managed Care n = 44. Standard Deviations are in parentheses

that therapists who were in the Feedback condition may have been more supportive of the study, since they were given client reports on a regular basis, and may have encouraged their clients to participate.

Of those clients who began the study, however, there were no significant differences between the experimental conditions or the management systems in the number of individuals who dropped out of the study prior to T2 ($n = 50$). Fourteen participants (36.8%) in the

control condition, 26 (39.4%) in the feedback condition, and 10 (43.5%) in the no feedback condition dropped out, $\chi^2 (2, N=127) = 0.26, p < .88$; while 21 (36.2%) in the managed care group and 29 (42.0%) in the non-managed care group dropped out, $\chi^2 (1, N=127) = 0.45, p < .50$. The only significant difference in the demographic characteristics for dropout rate was between males and females, with males dropping out significantly more frequently than females, 54.3% vs. 33.7%, $\chi^2 (1, N=127) = 4.50, p < .03$. There were also significant differences on two of the clinical outcome measures, with those individuals who dropped out reporting higher self-esteem, means = 3.36 vs. 3.33, $t (126) = 2.25, p < .03$, and less stress, means = 3.26 vs. 3.79, $t (126) = 3.84, p < .001$, perhaps indicating they felt less need for therapy.

Differences between those who dropped out after T2 and before T3 ($n = 18$) were also found on the T2 clinical outcome measures. Individuals who dropped out of therapy were more likely to have problems at work or school, means = 9.22 vs. 2.93, and to report less productivity, 57.5% vs. 77.3%, $ts (75) > 2.21, ps < .04$. A difference was also found on the Rand MHI, means = 32.23 vs. 42.86, $t (75) = 1.97, p < .05$, with dropouts indicating lower levels of mental health, although none of the other outcome measures was significantly different. A demographic differences was also found, with dropouts being younger, 28.2 years vs. 37.6 years, $t (75) = 2.98, p < .01$. Again, no differences by treatment conditions $\chi^2 (2, N=75) = 3.91, p < .14$ or by management systems was found, $\chi^2 (1, N=75) = 0.53, p < .47$.

Testing of the Hypotheses

H1: Treatment duration will have a positive curvilinear relationship with patient's clinical outcome measures from T1 to T3, and a positive linear relationship with the more distal measures of physical health, self-esteem, perceived stress, service utilization, and the work-related measures. It was expected that changes in mental health symptoms and functioning would be curvilinear, whereas the more distal outcomes would display a linear relationship, with positive changes occurring later in therapy. In order to address Hypothesis 1, scores on the outcome variables were analyzed with SAS PROC MIXED growth curve procedures. Advocates of the growth curve approach to modeling change over time suggest that since the method makes use of all the available information, it can provide better estimates of change rates (Speer & Greenbaum, 1995, Singer, 1999; Willett, 1994, Willett & Sayers, 1994). A correlation matrix established the relationship between the outcome variables at T1 and is presented in Table 3.

Table 3. Correlations Among the Outcome Variables

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|----------------------------|---------|--------|---------|-------|--------|---------|-------|
| 1. Mental Health Composite | 1.000 | | | | | | |
| 2. Physical Health | .52*** | 1.000 | | | | | |
| 3. Self-esteem | .67*** | .31*** | 1.000 | | | | |
| 4. Perceived Stress | -.59*** | -.27** | -.48*** | 1.000 | | | |
| 5. Service Utilization | -.02 | -.28** | .11 | .13 | 1.000 | | |
| 6. Work/school Problems | -.15 | -.20* | -.05 | -.06 | .34*** | 1.000 | |
| 7. Work Productivity (5) | .42*** | .43*** | .22* | -.14 | -.32** | -.34*** | 1.000 |

* $p < .05$; ** $p < .01$; *** $p < .001$

As expected, duration of therapy produced significant curvilinear effects on the Total Mental Health composite. The effect of time was significant, $t(df=126) = 7.43, p < .001$. When the squared term was entered into the equation, the effect of time remained significant, $t(df=126) = 6.23, p < .001$, and time squared was also significant, $t(df=132) = -4.02, p < .001$. The greatest improvement was established early in treatment, from T1 to T2. Self-esteem and perceived stress also displayed a curvilinear pattern. Regarding self-esteem, the effect of time was significant, $t(df=128) = 5.05, p < .001$. When time squared was entered in the equation, the effects of time remained significant, $t(df=127) = 4.06, p < .001$, and time squared was also significant, $t(df=127) = -2.55, p < .02$. Regarding perceived stress, the effect of time was significant, $t(df=128) = -8.66, p < .001$. When the squared term was entered, time remained significant, $t(df=127) = -9.98, p < .001$, and time squared was also significant, $t(df=127) = 7.18, p < .001$. To summarize, the measures of mental health symptoms and functioning, self-esteem, and perceived stress displayed a positive curvilinear pattern of change over time (see Figure 1).

The measure of physical health displayed a positive linear relationship, as predicted. The effect of time, $t(df=131) = 3.84, p < .001$ was significant, whereas when the squared term was added to the equation, time remained significant, $t(df=130) = 2.81, p < .01$, but time squared was not significant, $t(df=130) = -1.72, n.s.$ The same pattern could be seen on the measure of work/school related problems. The effect of time was significant, $t(df=124) = -2.19, p < .05$. Adding the squared term to the equation resulted in maintaining the significant effects of time, $t(df=123) = -2.58, p < .02$, whereas time squared was non-significant, $t(df=123) = 1.84, n.s.$ The measure of service utilization also showed a

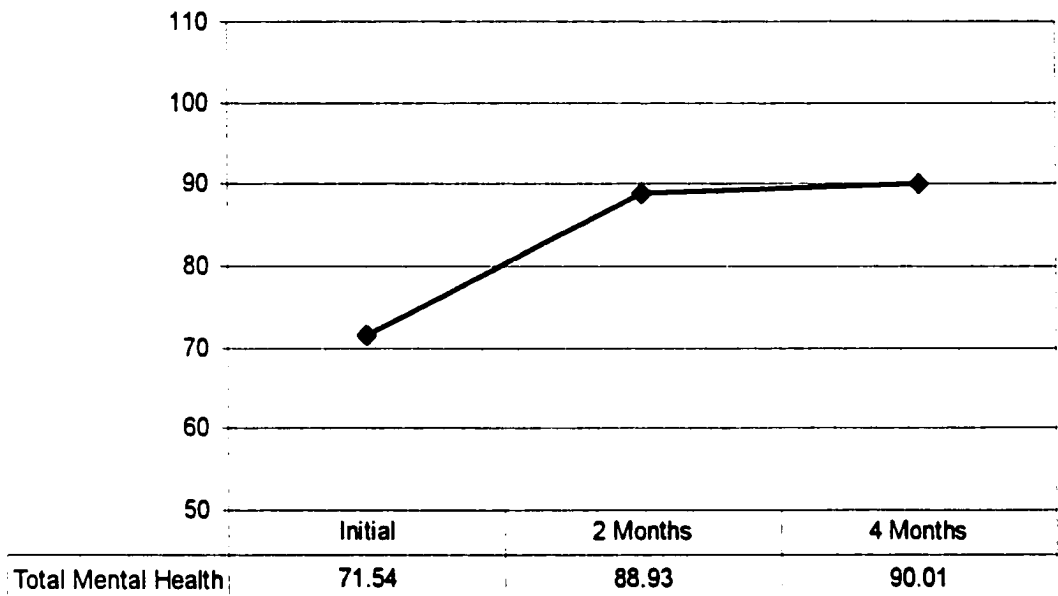


Figure 1. Average Scores on Total Mental Health Over Time

significant effect of time, t ($df=129$) = - 2.06, $p < .05$. However, when the squared term was added, the effect of time became non-significant, t ($df=128$) = - 0.98, n.s., as was the effect of time squared, t ($N=127$) = .16, n.s. The estimate of the percentage of work productivity was not significantly predicted by either time or time squared. The average scores on the measures over time can be seen in Table 4 (see Appendix III for a graphical representation).

Table 5 below presents the results of analyses of the percentages of individuals who scored above the cut-off line for the subscales and the total scale of the OQ at each time. Utilizing cut-off scales that have a community sample as a comparison group can assist in demonstrating the practical significance of the results of mental health treatment, since percentages are in a scale that enhances understanding (see Appendix III.)

Table 4. Average Scores for The Scales Over Time

| Measure | Initial | 2 Month | 4 Month | Range |
|----------------------|---------------|---------------|---------------|---------|
| Total Mental Health | 72.89 (20.67) | 88.76 (23.55) | 90.68 (24.30) | 0 – 180 |
| Physical Health | 65.13 (24.61) | 71.04 (23.18) | 71.48 (23.77) | 0 – 100 |
| Self-Esteem | 3.45 (.75) | 3.74 (.74) | 3.77 (.78) | 1 – 5 |
| Service Utilization | 7.18 (11.13) | 5.89(5.71) | 4.55 (5.95) | 0 – 92 |
| Work/School Problems | 4.76 (8.43) | 2.49 (4.56) | 3.00 (5.79) | 0 – 43 |
| Work Productivity % | 71.92 % | 80.82 % | 78.84 % | 0 – 100 |
| Stress | 3.58 (.80) | 2.86 (.84) | 2.91 (.92) | 1 – 5 |

\bar{N} = 127 Initial; \bar{N} = 75 2 Month; \bar{N} = 59 4 Month. Standard Deviations in parentheses.

Table 5. Percentage Within the Healthy Range

| Measure | Initial | 2 Month | 4 Month |
|----------------------------|---------|---------|---------|
| OQ Total Score | 28.3 | 45.3* | 54.2* |
| OQ Symptom Distress | 27.6 | 49.3* | 57.6* |
| OQ Interpersonal Relations | 26.0 | 44.0* | 55.9* |
| OQ Social Role Performance | 44.1 | 58.7* | 61.0* |

\bar{N} = 127 Initial; \bar{N} = 75 2 Month; \bar{N} = 59 4 Month.

* Indicates significant differences in χ^2 values from the Initial measurement, $p < .05$. Only individuals measured at both time frames are included in the statistical tests.

H2: Feedback to clinicians on client progress will significantly improve patient outcomes in comparison with clients whose clinicians do not receive such feedback; and

H3: The effects of feedback will be moderated by the management system. These two hypotheses were addressed with the following analyses.

Subjects were nested both within centers (the 3 satellite clinics) and therapists. In order to assess therapist and center effects prior to conducting further analyses, an analysis of these effects on the primary outcome of interest, Total Mental Health, was conducted using a

one-way ANCOVA with the T1 Total Mental Health score as a covariate. The results were non-significant, so it was not necessary to proceed with a multilevel analysis.

The effects of feedback and moderation by management systems on Total Mental Health were tested using SAS PROC MIXED growth curve procedures. The SAS multilevel procedure allows for many different models to be fit and compared. Models were fit that tested different ways of coding time in order to specify intercept estimation at T1 and T3, and also estimate slopes for change at both T2 and T3. Different structures for error terms were also tested, with the unstructured error terms demonstrating a better fit than autoregressive or compound symmetry error specification.

When time was coded to evaluate the slopes, the beta weight for T2 was 17.91, $t(132) = 7.22$, $p < .001$, indicating that the average score on the dependent measure of Total Mental Health improved 17.91 points between T1 and T2. The beta weight for T3, indicating improvement on the dependent measure between T1 and T3 was 18.89, $t(132) = 8.16$, $p < .001$, demonstrating a very small improvement between T2 and T3, the curvilinear effect that has been demonstrated previously.

Next, the feedback and the no-feedback conditions were dummy coded to compare effects with the control condition (reference category) and were entered into the equation along with the management system variable, with time coded so that the differences were evaluated at T1 and again at T3. Both the no feedback condition, $t(123) = 2.33$, $p < .02$, and the feedback condition, $t(123) = 2.01$, $p < .05$ were significantly different from the control condition at T1, demonstrating the non-equivalence groups; at T3, only the no feedback condition remained significantly different than the control group, $t(123) = 2.12$, $p > .03$ (see

Figure 2). The management system variable was non-significant at T1 but marginally significant at T3, $t(123) = 1.86$, $p < .06$, with means indicating that the managed care group improved more than the non-managed care group from T1 to T3.

A marginally significant time by managed care interaction effect was demonstrated, $t(123) = 1.92$, $p < .06$, indicating that the managed care group showed greater improvement than the non-managed care group. Coding time to separate the effects of this interaction by time frames demonstrated that the effect was not present at T2, but was at T3, $t(123) = 1.98$, $p < .05$.

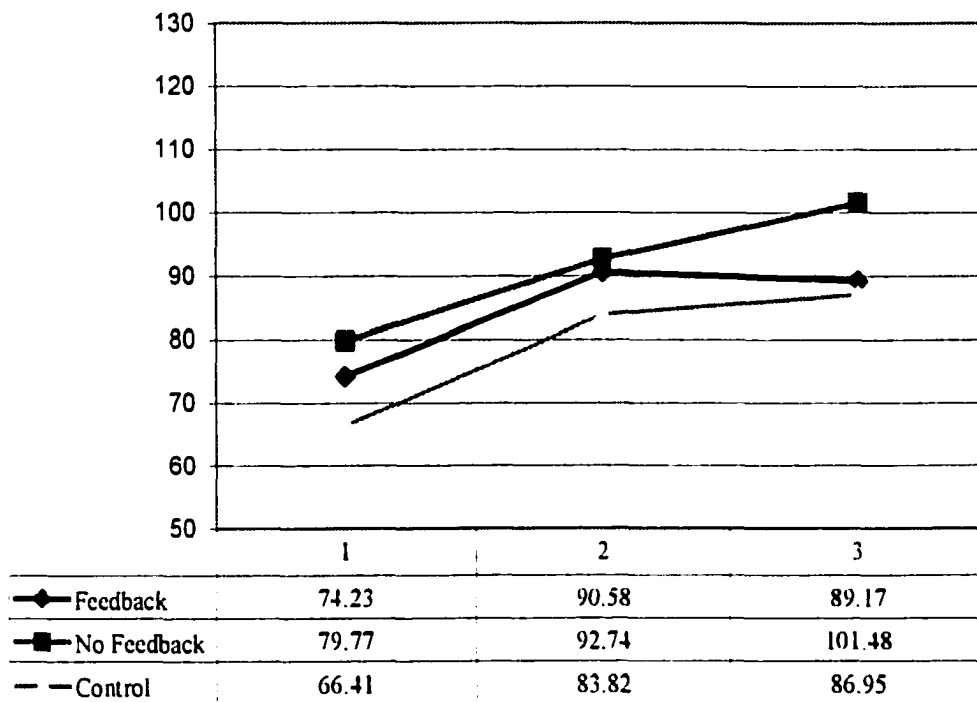


Figure 2. Average Scores on Total Mental Health Over Time for Treatment Conditions

The treatment conditions by managed care interactions were non-significant, indicating that treatment condition effects were not moderated by management systems. Figure 3 presents the means for the managed care and non-managed care groups over time.

H4: Managed care clients will have fewer sessions than non-managed care clients. In order to address Hypothesis 4, a t -test was conducted on the number of sessions for the managed care and the non-managed care groups. The results indicated no significant differences between the groups, $t(N=127) = 0.87$, n.s., with managed care group averaging 7.1 (SD=5.14) sessions and the non-managed care group averaging 6.3 (SD=4.97) sessions.

H5: Therapeutic alliance will predict both clinical outcomes and satisfaction with services, and the effects of clinical outcomes on satisfaction will be non-significant when the

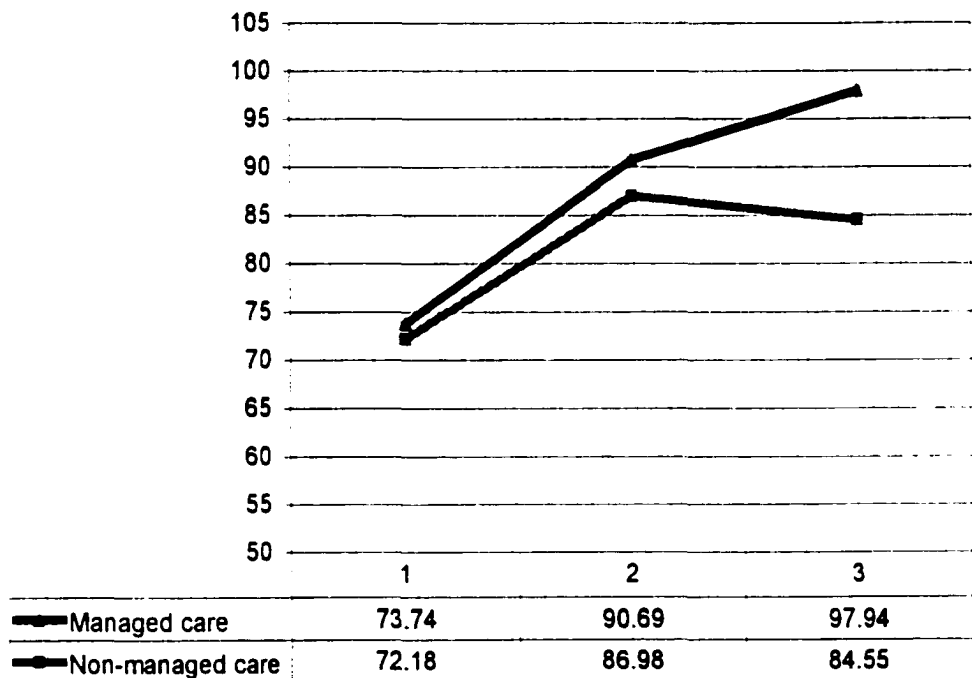


Figure 3. Average Scores for the Managed Care and Non-Managed Care Groups Over Time

effects of alliance are partialled out. Analyses revealed no significant correlations between clinical outcomes measured by change scores for Total Mental Health at T2 and T3 and Patient Satisfaction at T2 and T3. Therefore, no further analyses were conducted. There was, however, a significant correlation between Therapeutic Alliance and Patient Satisfaction at T3, $r = .48$, $p < .01$.

H6: Clinicians will evaluate managed care systems negatively; and H7: Clinicians will evaluate the monitoring system positively. Of the 11 therapists who participated in the study, 8 responded to follow-up surveys (5 of the therapists were no longer employed at the center). Of these, 5 of 6 of the therapists in the feedback condition responded to the questionnaire assessing their reaction to the feedback instrument.

Hypothesis 6 was confirmed, as the distribution of scores on the Managed Care Questionnaire indicated the clinicians generally agreed with statements critical of managed care on a scale from 1 “strongly agree” to 5 “strongly disagree.” The distributions for each of the 5 questions on the scale are presented in Table 6 below.

Table 6. Evaluation of Managed Care

| Question | 1 | 2 | 3 | 4 | 5 |
|----------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|
| I must tailor my diagnosis to comply with definitions of medical necessity | 1 | 6 | 0 | 1 | 0 |
| I frequently assess the need for treatment after the MC company has discontinued payment for services | 2 | 3 | 0 | 3 | 0 |
| MC requires more paper work that detracts from time spent with clients | 5 | 2 | 0 | 1 | 0 |
| MC requires treatment plans that target only certain types of improvements rather than other improvements I consider just as important | 4 | 3 | 0 | 1 | 0 |
| In general, I believe MC limits my ability to provide the best treatment | 3 | 3 | 1 | 0 | 1 |
| N = 8 | | | | | |

In addition, the qualitative information provided by the therapists sheds some light on results. For instance, several therapists agreed with a statement made by a senior therapist who said, “I do believe I tend to push my clients more to doing homework and self reporting due to managed care. At times, this is successful in meeting the immediate problem, but I tend to think it seems like a short term fix.” Another therapist felt that managed care . . . “limits treatment to dealing with symptom elimination verses getting to the root of the problem for more in-depth treatment with prospects for long term recovery more likely.” However, comments favorable to managed care were also made, such as “I am a strong believer that managed care companies that I have worked with want effective services for their clients, and their requirements tend to insure that the client’s services are effective. I like working with them and have never been refused services for a client.”

Hypothesis 7 was also generally confirmed. The distribution for the scores on the Provider Satisfaction Questionnaire is presented in Table 7 below, with items measured on a scale from 1 “strongly agree” to 5 “strongly disagree. Qualitative information also assists in understanding the results. Most of the therapists positively evaluated the feedback system, but others felt the process was a waste of their time. Comments included, “The benefits were worth the extra time, once I became more familiar with the instrument. I found it very helpful in treatment planning, especially if modification was required after a certain length of time with no response or negative response to treatment,” and “I think measuring client satisfaction is the key to improving services. The feedback instrument adds very little to my own clinical judgment and was not worth the time devoted to it.”

Table 7. Evaluation of the Feedback Instrument

| Question | 1 | 2 | 3 | 4 | 5 |
|--------------------------------------------------------------------|---|---|---|---|---|
| The instrument was easy to use for the client | 0 | 3 | 1 | 1 | 0 |
| The instrument was easy to use for the therapist | 1 | 3 | 0 | 1 | 0 |
| The instrument was a useful measure of client progress | 3 | 1 | 1 | 0 | 0 |
| The instrument helped me with treatment decisions | 1 | 2 | 2 | 0 | 0 |
| I would continue to use this instrument if available | 0 | 2 | 3 | 0 | 0 |
| I believe my own clinical knowledge is as good as the feedback | 0 | 2 | 3 | 0 | 0 |
| This instrument would be useful for MC systems to use in decisions | 1 | 1 | 3 | 0 | 0 |

N = 5

Discussion

The pre-treatment differences in mental health status by conditions were problematic in the study and difficult to interpret, since clients were assigned to the conditions randomly by case numbers assigned after the initial measurements were taken. Therapists were also assigned to the feedback conditions randomly, but the greater number of participants in the feedback condition could be due to therapists' propensity to encourage participation when feedback was given. Sample size was also problematic, as many statistical tests lacked power. Although the sample size limitations and pre-treatment differences in both the experimental conditions and managed care enrollment must be kept in mind, the results of this study suggest several conclusions.

First of all, for this sample of community mental health center clients, participation in managed care plans that included session limits and a utilization review component did not reduce the number of therapy sessions provided nor did participation negatively impact clinical outcomes. For this sample, clinical outcomes four months after the initiation of therapy indicate significant improvement for all therapy clients, with most of the improvement taking

place within two months. A marginally significant time by managed care interaction indicated that the average mental health status of the managed care condition improved more over time than the non-managed condition. An advantage for the managed care group is suggested by these analyses, as the managed care group continued to improve from T2 to T3, while the non-managed care group deteriorated slightly. It is likely that sample size limitations precluded statistical significance.

No definitive conclusions can be drawn about the impact of managed care in the sample because of the quasi-experimental nature of the design; that is, participants were not randomly assigned to managed care enrollment, and pre-treatment differences in the managed care and non-managed care sample existed. Managed care clients were significantly younger, more of them were single, fewer were employed full time, and more of them were female. Any one or any combination of these characteristics could be responsible for the improved response to therapy seen in the restricted sample analysis.

In order to follow-up on these possible explanations for the differences seen in the managed and non-managed care conditions, hierarchical regression analyses were conducted on the Total Mental Health composite. First, T1 Total Mental Health was entered into the regression to control for T1 status on outcome measure. Next, managed care and a demographic measure (age, gender, marital status (married or not married), number of family members, education, job status (full time or other), and income) were entered in step two. In the final step, the interaction term for the management system and the demographic measure was entered. Only the job measure was a significant predictor of Total Mental Health at T3, controlling for T1 status, indicating that having a full time job was associated with higher

scores on the outcome measure. None of the interaction terms was significant. These analyses suggest that the demographic measures contributed very little to the differences noted between the management systems.

It is interesting to speculate on the differences between groups on mental health status that suggest an advantage for the managed care group. Only job status was a significant predictor of mental health status when entered singly into a regression or ANCOVA analysis, and the interaction of demographic measures with the management system variable did not demonstrate moderation of the results by managed care status. In this sample, therefore, the pre-treatment differences measured cannot be responsible for the improvement in mental health status shown by the managed care group.

In order to speculate on the possible reasons for this occurrence, a statement by one of the therapists comes to mind. The therapist suggested that there was greater motivation on the part of the therapists to work in a timely manner toward positive therapeutic outcomes when managed care specifies time constraints. Perhaps this is also true for the clients. The effect of managed care may be that the knowledge of time constraints creates more motivation toward maximizing the benefits of therapy.

Analyses did not demonstrate positive effects of providing feedback to clinicians. There were no differences in changes over time for the feedback condition compared with the no feedback or control conditions. Significant beta weights for the feedback and no feedback conditions were attributable to differences that existed at T1.

It is also reasonable to conclude that the provision of therapy to these community mental health center clients was effective in reducing symptoms, improving functioning in both

the interpersonal and social sphere, improving physical health status, improving self-esteem, reducing service utilization, reducing problems at work or school, and reducing perceived stress. The only measured outcome that did not improve significantly was perceived work productivity. Also, work or school problems improved from T1 to T2, but deteriorated slightly from T2 to T3. This would indicate that work or school related difficulties, which could be considered more distal outcomes, are more resistant to improvements than the other outcome domains that were measured.

It is worth noting that service utilization declined significantly over time. That is somewhat surprising, since attending therapy is measured in the service utilization scale as use of mental health services. Fraser (1996) has speculated that providing mental health services may increase the use of other services, as clients may become aware of services that are available and may become more motivated to seek additional ways of improving their lives, such as applying for social services or seeking physical health care. This was not the case, however, in this sample, providing some evidence for the cost-offset of psychotherapy.

Physical health, service utilization, and work or school related measures were included in this study in order to assess the degree of improvement in more distal outcome domains, which may argue for the cost-savings of providing mental health treatment. Although costs and benefits were not measured, the results do suggest that the type of improvements that occur when mental health care is provided may produce cost-savings to insurance companies, government agencies, and employers or school personnel.

Therapeutic alliance has often been found to predict therapeutic outcomes (Blatt et al., 1996; Horvath & Luborsky, 1993; Krupnick et al., 1996; Luborsky, 1994). It has also been

correlated with patient satisfaction (Barker et al., 1996; Solomon & Draine, 1994). The study predicted that the correlation between client outcomes and satisfaction with care would become non-significant when the effects of therapeutic alliance were partialled out. However, the results indicated no significant correlations between the outcomes of therapy based on change scores and either satisfaction with care or therapeutic alliance. The lack of a significant correlation between therapeutic alliance and treatment outcomes was surprising, and may be attributable to limitations of the measure of therapeutic alliance. The measure was recently developed and had not been previously evaluated. It was chosen partially to relieve client burden, but since the instrument had few items and measured only the dimension of therapeutic bond, it may not be an adequate measure of the alliance construct. However, there was a significant correlation between therapeutic alliance and satisfaction with care at T3, and the correlation between therapeutic alliance and satisfaction with care at T2 approached significance ($r = .27, p < .06$).

These results support recent research that has failed to find a relationship between satisfaction and improvements in symptoms (Lunnen & Ogles, 1998; Pekarik & Wolff (1996). It is not unusual for satisfaction to be high, even when clinical results suggest that the client has actually deteriorated (Lunnen & Ogles, 1998). Both alliance and satisfaction were rated relatively high in this study, with the alliance mean at 3.29 (SD=.67) on a scale from 0 – 4 and the satisfaction mean at 4.05 (SD=.55) T2 and 4.12 (SD=.51) T3 on a scale from 1 – 5, indicating perhaps a ceiling effect. Certainly these results suggest that measures of alliance and satisfaction, while relevant to the evaluation of mental health services and quality improvement, cannot substitute for measures of clinically relevant outcome domains. If cost-

effectiveness is a goal in the provision of mental health services, this study provides no evidence that measuring either alliance or satisfaction will provide relevant information about cost-related domains, such as improved symptoms and functioning, improved physical health status, improved job or work related functioning, or reduced use of services.

It is also interesting to note that therapist and client estimates of mental health correlated only at T3 ($r = .52, p < .01$). Therefore, it would seem that client self-reports in this area would be more appropriate to use in outcome assessment than clinician reports. Other researchers, however, have found substantial agreement between client and clinician ratings of the amount of therapeutic change (Pekarik & Wolff, 1996; Lunnen & Ogles, 1998).

This study did not find a significant effect of providing feedback to clinicians regarding client progress on clinical outcomes, although therapists who received feedback generally rated the feedback instrument as a useful measure of client progress and helpful in guiding treatment decisions. There may be many factors related to the lack of clinically relevant results, including characteristics of therapists. The small sample size, 11 therapists, precludes analyses to differentiate therapist characteristics. There are many potentially relevant moderating factors to consider in future research, such as payment incentives, therapist experience with managed care, the processes whereby results from feedback are utilized by therapists, therapist self-efficacy, and autonomy in decision-making.

It is also not surprising that therapists rated managed care systems negatively. This result is consistent with many other studies regarding therapist perceptions of managed care. Therapists generally believe that time constraints impact negatively on therapeutic results,

often creating an incentive to discontinue therapy before maximum results have been achieved. The work of Howard's group at Northwestern has demonstrated a dose effect that is curvilinear in nature, with the majority of clients improving significantly early in therapy (Howard, Kopta, Krause, & Orlinsky, 1986; Howard, Leuger, Maling, & Martinovich, 1993; Howard, Moras, Brill, Martinovich, & Lutz, 1996). However, they also note that there are other individuals who improve more slowly, some much more slowly, and these individuals may be harmed by the session limits currently imposed by managed care companies.

In this sample, for instance, there were 13 of 75 individuals at T2 (17%) who either stayed the same or deteriorated over time, and at T3, there were 9 of 59 individuals (15%). Only 2 individuals who demonstrated no change or a deterioration dropped out of therapy between T2 and T3, indicating that 11 of the 13 were willing to continue therapy. A feedback system such as the one tested here would be most beneficial in detecting those clients who were either not making progress at a rate comparable to the average client or who were deteriorating over time. These individuals could then be singled out for further evaluation or an adjustment to their therapeutic regimen. The advantage of a monitoring system such as the one evaluated here is that problems in the provision of therapy could be detected earlier and more appropriate treatment could be provided on an individual, case-by-case basis, rather than arbitrarily according to group standards, as is often the case in care decisions made by utilization review.

CHAPTER 5

CONCLUSIONS

Summary

The current study was undertaken in the context of a major paradigm shift in the delivery of mental health services. Beginning in the 1980s and accelerating in the 1990s, this shift has resulted in managed care organizations (MCOs) managing the majority of third party payments distributed for mental health services. Prior to the advent of managed care, providers were paid on a fee-for-service basis, with clinical decisions as to level and amount of care made primarily by the providers themselves. With the advent of managed care, designed to curtail the accelerating costs of providing mental health care, third party payers have contracted with MCOs to place restrictions on the delivery of mental health services in the form of lower payments for services, restrictions on the level and amount of care authorized as reimbursable, and the oversight of treatment decisions in the form of utilization review.

These changes have not been popular with mental health service providers, who have criticized MCOs for curtailing costs at the expense of treatment quality. Mental health practitioners have been especially critical of utilization review and arbitrary session limits, claiming that these restrictions have not allowed them to provide needed care to some clients. Restrictions on amount and level of care have created an ethical dilemma for therapists who feel clients need treatment that will not be reimbursed by their managed care company. Discontinuing therapy under these conditions would be unethical, so therapists are faced with

three choices that are not entirely satisfactory: seeing these clients pro bono, finding alternate means of payment, or referring them elsewhere.

To address this dilemma, a group of psychotherapy researchers has developed a monitoring system consisting of a questionnaire measuring mental health symptoms and functioning (see Lambert et al., 1996). With this instrument, therapy clients are assessed at multiple time points over the course of psychotherapy and compared to community samples. The results are graphed and may be used by the clinician for ongoing treatment planning. The goal of the system is to provide more efficient and effective therapy; that is, when clients are not improving or are deteriorating, adjustments in the treatment regimen can be made to improve outcome.

Process feedback has long been associated with psychotherapy training, although outcome feedback has rarely been utilized or evaluated. The current study sought to evaluate the Outcomes Questionnaire (OQ) (developed by Lambert et al., 1996) by providing outcome feedback to randomly selected therapists at a community mental health center in a rural midwestern state. Therapists were randomly assigned to two conditions: 1) a feedback condition, where their clients would be assessed at each therapy session, and the results graphed and returned to the therapist; and 2) a no feedback condition, where their clients would be assessed at each session, but the results would not be returned to the therapist. Random assignment also included a control condition, where clients of both the feedback and no feedback therapists were randomly assigned to receive no intervention (treatment as usual). All participating clients were assessed with multiple instruments at the initial session, after two months of therapy, and again after another two months of therapy.

Measures of mental health symptoms and functioning, physical health, self-esteem, perceived stress, work and school problems and productivity, and service utilization were all assessed at the three time points. A measure of therapeutic alliance was assessed at the third session, and satisfaction with care was assessed at T2 and T3.

The first hypothesis predicted a positive curvilinear relationship between treatment duration and the clinical outcomes. A curvilinear effect for treatment duration has been found in earlier research, with most of the improvement in mental health symptoms and functioning occurring early in therapy. This hypothesis was supported by the results of the study. Significant curvilinear relationships were found for the measures of mental health, self-esteem, and perceived stress. It was hypothesized that the additional outcomes measured would improve more slowly. A linear relationship was established for physical health, service utilization and work/school problems, whereas the measure of perceived work productivity did not improve significantly over time.

These results support the benefits of psychotherapy for both proximal and distal outcomes, indicating that psychotherapy may be very cost-effective. In particular, the improvement in physical health and the decrease in service utilization documented here suggest cost-savings. Although work-related measures did not show as much improvement in the time frame measured here, this outcome domain may be more distal and less responsive to psychotherapy over the course of the four months clients were measured.

Further hypotheses predicted a positive effect for the provision of outcome feedback to clinicians on client outcomes and moderation by the management systems (with managed care defined as restrictions on session limits and utilization review), such that non-managed

care clients would show more positive outcomes than managed care clients. This hypothesis was based on the fact that therapists working with managed care clients would not have as much flexibility in treatment decisions, since session limits were in place and utilization reviewers were responsible for determining what services were reimbursable. Neither of these hypotheses was supported by the results. Pre-treatment differences in mental health status for the experimental conditions and pre-treatment differences in certain demographic measures for the managed care vs. non-managed care groups, plus the small sample size, precluded definitive conclusions.

No significant differences were found in the slope of change over time between conditions, although a marginally significant slope of change over time for the managed care group was detected. Care must be taken in interpreting these findings due to the pre-treatment differences. However, follow-up analyses indicated that the pre-treatment differences between the groups on demographic measures were not likely to be related to the differences between the managed care groups on mental health status. Because the small sample size created difficulties in attaining statistical significance, further study is warranted. It is safe to conclude that results do indicate that managed care clients are not harmed by enrollment in managed care.

It was also determined that enrollment in managed care did not affect the number of sessions, with the managed care group averaging 7.1 sessions and the non-managed care group averaging 6.3 sessions, a non-significant difference, although in the opposite direction than predicted. In this area of the Midwest, managed care has not severely restricted services for their enrollees. The center staff reports differences between managed care programs, with

some programs specifying session limits as low as three per year, whereas other plans specify limits as high as 20 or 30 sessions. They also report varying degrees of difficulty with concurrent review when the therapist requests additional sessions.

Another hypothesis was related to therapeutic process and measurement of psychotherapy outcomes relevant to stakeholders interested in evaluating the quality of care and cost-effectiveness of services. Therapeutic alliance, defined as the degree of client belief in the trustworthiness of the therapist and the efficacy of therapy, has been found to be associated with both treatment outcomes and satisfaction with services. Since satisfaction with services has often been the only outcome measured when evaluating mental health services, researchers have been interested in its association with clinical outcomes. Although results have been mixed, in general, satisfaction has been shown to be unrelated to clinical outcomes, and such was the case in this study as well. The study postulated a null relationship between satisfaction and clinical outcomes with therapeutic alliance partialled out. However, there was no correlation between either satisfaction or therapeutic alliance and outcomes. Limitations of the measure of therapeutic alliance may explain the lack of a relationship between alliance and clinical outcomes. The alliance instrument had not been previously evaluated and may be inadequate to measure the construct of treatment alliance. However, there was a relationship between therapeutic alliance and satisfaction, suggesting that these variables may be used to evaluate the delivery of services, but are probably not very useful in evaluating the cost-effectiveness of psychotherapy, which depends on positive clinical outcomes.

As predicted, clinicians generally rated managed care negatively. Their responses indicated they felt managed care put restrictions on their clinical decision making, imposed more paperwork demands, and limited their ability to provide the best treatment to clients, but they also felt that time limits may have motivated them to produce therapeutic results more quickly and change their therapeutic approach to include such techniques as homework assignments. Also as predicted, clinicians rated the feedback system as generally positive. They felt it was a useful measure of client progress, was relatively easy to use, and assisted in treatment decisions.

The results of this study can be viewed from several perspectives. From the perspective of mental health consumers, the study demonstrated the positive effects of a course of psychotherapy on multiple outcome domains. The study also suggests that those clients who do not see benefits within the first two months of therapy should request a consultation or a change in treatment strategies. Most clients do benefit from therapy, so if no benefits are apparent after a trial period, an adjustment in the treatment plan should be considered.

From the perspective of the provider, the study demonstrates the efficacy of therapy, and suggests that outcome monitoring can provide additional information to be evaluated in on-going treatment planning. Although no significant effect of providing outcome feedback to clinicians was detected, study limitations may have precluded the detection of effects. Clinicians found the instrument generally useful. In addition, although clinicians do not like aspects of managed care, this study suggests that no harm is done to the majority of clients, and indicates that managed care clients improve more than non-managed care clients over a

four-month time period. Research should be conducted to determine the possible mediators of this effect, since the number of therapy sessions was not responsible for the differences noted in this study.

Finally, from the perspective of management systems, it would seem that if session limits are set at a reasonable length of time, clients will not be harmed. However, some clients will not respond or will deteriorate over a course of therapy. Since, in general, the provision of therapy is associated with positive results over several quality of life outcome domains, management systems should be responsive to requests for additional sessions, with careful attention to on-going evaluations and treatment plan adjustments.

In conclusion, this study demonstrated the efficacy of providing mental health services in this rural community mental health center by showing positive results on several measures of quality of life, including mental health symptoms, physical health symptoms, self-esteem, perceived stress, service utilization, and work-related measures. The study population was satisfied with the services, though their level of satisfaction was unrelated to their progress in therapy. Although therapists generally dislike managed care, the managed care clients did no worse than non-managed care clients, and there were indications that they may have done somewhat better. The provision of feedback to clinicians on client progress was generally well accepted by this group of 11 therapists, although no indication of differences in improvement over time for the clients whose therapists received feedback was detected.

Recommendations and Further Research

Some of the study limitations have been addressed, such as the small sample size and the pre-treatment differences that were detected. Although it is impossible to assign clients to managed or non-managed care, a larger sample size may eliminate the pre-treatment differences found in the mental health status measure and could determine if the pre-treatment differences in managed care vs. non-managed care were specific to this sample.

Care must be taken in generalizing from a sample of primarily Caucasian rural Midwesterners to other population types or other areas of the country. It is also important to note that managed care has penetrated the market unevenly, with fewer individuals in rural than urban areas under managed care contracts. Managed care is becoming more dominant even in the rural Midwest, and in this sample, approximately half of the clients were under managed care contracts. The managed care companies that interacted with this center specified differing restrictions, with some companies limiting therapy to 3 sessions, and others having limits of 20 sessions or more. When limits are reached, companies also vary in their utilization review policies, with some companies rigidly limiting sessions and others more responsive to clinician requests. It is obvious from the analysis of therapy dosage that the managed care companies in this center did not impose very restrictive limits on the number of sessions. In future studies, care should be taken further to specify managed care characteristics, perhaps by a quantitative measure based on number of initial sessions allowed and responses to requests for further sessions, so that generalizations to other managed care companies can be made.

Even though no differences were found in clinical outcomes between clients whose therapist received feedback on their progress and those who did not, the study's results do not warrant the conclusion that feedback was not beneficial. The clinicians generally rated the system positively, identifying the strengths that have been promoted by the developers of individual client monitoring systems, such as the ability to detect lack of progress and deterioration in clients. There may be many reasons for the lack of effects for the provision of feedback, including therapist variables, such as self-efficacy and experience with managed care; system level variables, such as the degree of decision-making autonomy given to clinicians, reimbursement specifications, and coordination of the treatment team; and procedural variables, such as the immediacy of feedback and the inclusion of more potential participants. Future studies should either control for or measure more of these variables that may affect results.

It would also be beneficial to follow-up clients for a longer time period and to make a concerted effort to track clients who are no longer participating in therapy to discover if they are continuing therapy elsewhere, as well as to continue to monitor their progress. With more participants and a longer follow-up, a clearer picture of the results of the intervention, the influence of managed care, and of client progress in general could be provided. It may very well be that results of utilizing a clinical feedback system would become more apparent over longer periods of time when curtailing session limits would be more likely to demonstrate deleterious effects. The most interesting clients to track would be those who were not benefiting from therapy or who were deteriorating in order to determine if arbitrary limits on the number of therapy sessions caused further deterioration.

On a different note, it would also be beneficial to explore ways of documenting the cost-effectiveness or cost-benefits of the provision of psychotherapy services. The current study indicates improvements in many quality of life domains that would likely demonstrate cost savings to the individuals, insurance companies, and governmental agencies responsible for funding health care and other social services. Although this type of econometric research is new to the psychotherapy field, coordinated efforts with economists and health services researchers should be undertaken to assist policy makers in determining best practices. It seems sensible to assume that providing the amount of mental health care that will optimally rehabilitate clients would be the most cost-effective practice. It would also seem that some method for measuring mental health and tracking progress in order to individualize the treatment plan would also be advisable.

There are also recommendations for mental health service delivery that follow from this study. Once again, this study has confirmed that the provision of psychotherapy has generally positive results, and that these results extend over multiple quality of life domains. The study has also confirmed that there is a group of clients who do not change at the rate expected or who deteriorate over the course of psychotherapy. Knowing this, policy makers and those responsible for providing mental health services should provide psychotherapy when it is indicated. This study suggests that the provision of therapy will lead to positive changes in multiple life domains and will thus be cost-effective, as well as humanitarian.

The results of the therapists' ratings also suggest the utility of a monitoring system to track the results of therapy and modify treatment plans accordingly. By tracking progress, clients could be discharged when their progress warrants it; that is, when they match a

community or normative sample. Treatment regimens could be adjusted if progress is delayed or deterioration is detected. Even though a significant effect of the provision of outcome feedback was not detected in this study, possibly due to the limitations described above, those responsible for paying for mental health services may see the usefulness of such a monitoring system for treatment decisions that could provide more cost-effective services.

And finally, the study provided support for measuring clinical outcomes rather than satisfaction with care for those interested in providing cost-effective services. Satisfaction with care is usually high for mental health services and is not often correlated with clinical outcomes, as was the case in the present study. Although satisfaction with care is important and should not be neglected, it is not the most important measure of quality of services, nor can it be expected to predict the clinical or cost-related benefits of therapy.

APPENDIX I

SURVEY INSTRUMENTS

Client Level of Functioning

Last Name: _____ First Name: _____ Date Completed: _____

Completed by (check all that apply):

☐ Clinician ☐ Unit Staff ☐ Other Caregiver

Stage of Treatment (Mark one):

☐ Intake ☐ Treatment ☐ Discharge ☐ Follow-up

Please rate the patient's level of functioning according to the following scale:

During the last month, the patient had problems or needed assistance:

4. Rarely or never 3. Occasionally 2. Often or Frequently 1. Most or all of the time

Care of Self

- | | |
|---------------------------------------------------------------------|---------------------------------------------------------------------|
| <input type="checkbox"/> Performing personal hygiene and grooming. | <input type="checkbox"/> Making and keeping necessary appointments. |
| <input type="checkbox"/> Recognizing and avoiding common dangers. | <input type="checkbox"/> Managing medications and health care. |
| <input type="checkbox"/> Eating an adequate diet in proper amounts. | |

Living in the Community

- | | |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> Caring for own living space. | <input type="checkbox"/> Preparing or obtaining meals. |
| <input type="checkbox"/> Performing household duties. | <input type="checkbox"/> Using transportation and community services. |
| <input type="checkbox"/> Handling personal finances. | <input type="checkbox"/> Traveling from residence to required destinations. |
| <input type="checkbox"/> Shopping for food, clothing, or personal needs. | |

Social and Family Interaction

- | | |
|----------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> Communicating clearly. | <input type="checkbox"/> Managing family or interpersonal responsibilities. |
| <input type="checkbox"/> Asking for help when needed. | <input type="checkbox"/> Effectively handling conflicts with others. |
| <input type="checkbox"/> Responding to social contact from others. | <input type="checkbox"/> Managing assertiveness effectively. |
| <input type="checkbox"/> Forming and maintaining a social support network. | <input type="checkbox"/> Managing leisure time to personal satisfaction. |

Concentration and Work Performance

- | | |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <input type="checkbox"/> Remembering locations and procedures. | <input type="checkbox"/> Arriving for regular appointments punctually. |
| <input type="checkbox"/> Understanding and remembering instructions. | <input type="checkbox"/> Coordinating work with others without distraction. |
| <input type="checkbox"/> Maintaining attention and concentration. | <input type="checkbox"/> Working consistently without undue rest periods. |
| <input type="checkbox"/> Performing within a schedule. | <input type="checkbox"/> Completing simple tasks without errors. |

Impulsive, Dangerous, or Maladaptive Behavior

- | | |
|------------------------------------------------------------|---------------------------------------------------------------------|
| <input type="checkbox"/> Took property without permission. | <input type="checkbox"/> Verbally assaulted another person. |
| <input type="checkbox"/> Damaged or destroyed property. | <input type="checkbox"/> Made a threat of physical violence. |
| <input type="checkbox"/> Set a fire. | <input type="checkbox"/> Physically harmed self or another person. |
| <input type="checkbox"/> Abused drugs. | <input type="checkbox"/> Expressed a suicidal threat or behavior. |
| <input type="checkbox"/> Abused alcohol. | <input type="checkbox"/> Needed involuntary mental health services. |
| <input type="checkbox"/> Created a public disturbance. | |

Overall Rating of Functioning Please select the best description of the client's current functioning.

1. Persistent danger of severely hurting self or others (suicidal, violent, extreme impulsivity).
2. Some danger of hurting self/others (suicide attempt, manic excitement, severe agitation).
3. Inability to function in almost all areas (suicidal preoccupation, delusional behavior, incoherent).
4. Major impairment in several areas (unable to keep job, frequent arrests, inability to decide, no friends).
5. Serious symptoms or impairment in several areas (unable to care for family, preoccupation with thoughts).
6. Moderate symptoms or impairment (few friends, frequent depressed mood, occasional anxiety attacks).
7. Some persistent mild symptoms (social/occupational difficulty but has some meaningful relationships).
8. Some transient mild symptoms (expected reactions to stressors, slight impairment in functioning).
9. No or minimal symptoms (satisfied, interested/involved, effective, no more than everyday problems).

Managed Care Questionnaire

For the purposes of this evaluation, **managed care** is defined as care where preauthorization for services and/or limits on the number of sessions (with or without review and reauthorization) is a requirement for payment for mental health services. Please compare **managed care** services under this definition with **non-managed care**, where payment for treatment is not dependent on any third party authorization, but is entirely dependent on decisions made by the clinician in consultation with the client.

| | Strongly Agree | Not sure | Strongly Disagree |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| | Agree | | Disagree |
| 1. In managed care cases, I must tailor my diagnosis to comply with definitions of medical necessity (or treatable conditions) that are reimbursable by the payer | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. In managed care cases, I frequently assess the continued need for treatment after the managed care company has discontinued payment for services | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Managed care requires more paper work that detracts from the time I can spend treating clients . . . | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Managed care cases require treatment plans that target only certain types of improvements, such as improvements in functional status, rather than other types of improvements I consider just as important (such as insight development) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. In general, I believe managed care limits my ability to provide the best treatment to my clients. . . | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

6. Please add other comments regarding managed care vs. non-managed care:

Provider Satisfaction¹⁰⁹ Questionnaire

| | Strongly Agree | Agree | Not sure | Disagree | Strongly Disagree |
|---------------------------------------------------------------------------------------------------------------------|-------------------|-------|----------|----------|----------------------|
| 1. The instrument was easy to use for the client | | | | | |
| 2. The instrument was easy to use for the therapist | | | | | |
| 3. The instrument was a useful measure of client progress. | | | | | |
| 4. The instrument helped me with treatment decisions. | | | | | |
| 5. I would continue to use this instrument if available | | | | | |
| 6. I believe my own clinical knowledge is as good as the information from feedback | | | | | |
| 7. This instrument would be useful for care management systems to determine appropriate services for patients | | | | | |
| 8. Please add other comments regarding the instrument _____ | | | | | |

WELCOME TO PLAINS AREA¹¹⁰ MENTAL HEALTH CENTER

It is a Sign of STRENGTH, CARING, AND
COURAGE to seek professional help!

FOR OFFICE USE ONLY

Admission Date: ____/____/____ Office: 1 2 3 4
PAMHC Client #: _____
PAMHC Therapist #: _____
PAMHC Guardian #: 1 _____ 2 _____ 3 _____
PAMHC Insurance Code: 1 _____ 2 _____ 3 _____

CLIENT INFORMATION

Last Name: _____ Home Phone: (____) _____ - ____
First Name: _____ Work Phone: (____) _____ - ____
Initial: _____ Date of Birth ____/____/____
SS #: _____ Age: _____
Mail Address: _____ Gender: _____ (M or F)
Street Address: _____
City: _____ State _____ Country: _____ Zip: _____
Referring Physician: _____
Family Physician: _____
Legal Guardian (Name & Phone): _____
Emergency Contact (Name & Phone): _____

PLEASE CIRCLE APPROPRIATE "CODE" BELOW

| Race | Code | Education | Code | Marital Status | Code |
|-----------------------|------|----------------------|------|---------------------|------|
| White | 1 | None | 1 | Never Married | 1 |
| Native American | 2 | 1 to 8 years | 2 | Married | 2 |
| Black | 3 | 9 to 12 years | 3 | Divorced | 3 |
| Hispanic | 4 | Voc/Tech | 4 | Widowed | 4 |
| Asian | 5 | 4 Year College | 5 | Separated | 5 |
| Other | 9 | Post Grad | 6 | | |

| Employment Status | Code | Who Referred You To Us | Code |
|---------------------------|------|-------------------------------------------|------|
| Full Time | 1 | Self, Family, Friend | 1 |
| Part Time | 2 | Physician, Hospital, Public Health | 2 |
| Seasonal/Occasional | 3 | Psychiatric Hospital/Inpatient Prog. | 3 |
| Unemployed | 4 | Other Mental Health Provider | 4 |
| Homemaker | 5 | Schools, AEA | 5 |
| Student | 6 | Clergy | 6 |
| Retired | 7 | Nursing Home, RCF, Group Home | 7 |
| Disabled | 8 | Court, Probation, Police, Attorney | 8 |
| Other | 9 | Employer or EAP | 9 |
| | | Department of Human Services | 10 |
| | | Voc Rehab, Disability Determination | 11 |
| | | Chemical Dependency Provider | 12 |
| | | Other | 02 |

PLEASE COMPLETE REVERSE SIDE
OF THIS FORM

111
PLAINS AREA MENTAL HEALTH CENTER
• PERSONAL HISTORY SHEET •

NAME _____ DATE _____

Your answers to the following will be helpful in the completion of your records. This as all other information will be kept confidential.

1. How would you describe your health? (excellent, good, fair, poor)
A. Physical _____ Emotional _____
2. My present problem is:

3. Previous psychiatric treatment or counseling that I have received includes:
When _____ Where _____
4. Present medication (name and dosage) _____
(both prescribed and non-prescribed)
5. When was the last time you felt well both physically and emotionally for a sustained period of time? _____

6. What is your goal in life? _____
7. How is most of your free time occupied? _____

Check Any Of The Following That Apply To You Now:

- | | |
|---------------------------------------|--------------------------------------|
| _____ headaches | _____ depressed |
| _____ dizziness | _____ suicidal ideas |
| _____ fainting spells | _____ always worried about something |
| _____ palpitations (rapid heart beat) | _____ unable to have a good time |
| _____ stomach trouble | _____ don't like weekends/vacations |
| _____ no appetite | _____ over-ambitious |
| _____ bowel disturbances | _____ sexual problems |
| _____ fatigue | _____ shy with people |
| _____ unable to sleep | _____ can't make friends |
| _____ nightmares | _____ can't make decisions |
| _____ take sedatives | _____ can't keep a job |
| _____ alcoholism | _____ inferiority feelings |
| _____ feel tense | _____ home conditions are bad |
| _____ feel panicky | _____ financial problems |
| _____ tremors | _____ dissatisfied with job |
| _____ unable to relax | |



FEE AGREEMENT AND FINANCIAL INFORMATION

Client Name: _____

Person Responsible For Payment: _____

Relationship to Client (please circle) self spouse parent child guardian other

Address: _____
 Street City State Zip Country

Phone: Home: _____ Work: _____

Date of Birth: Age: _____ Gender: M F SS#: _____

Employer: _____

Annual Gross Income of Person(s) Responsible For Payment: _____

Annual Adjusted Gross Income of Person(s) Responsible for Payment: _____

Number of Dependents (Number in Household): _____

I agree to the following conditions of payment for professional services at the Plains Area Mental Health Center (PAMHC):

1. To pay the sliding fee charges of \$ _____ or _____ % per hour for the above named client. If my fee is less than full cost of services, I am required to use my health insurance benefits in addition to the fee that has been negotiated. The full fee will be charged to those who have insurance coverage, but choose not to file.
2. That payment is due at the time service is provided, unless a payment plan has been established.
3. I understand that there will be a (\$12.00) charge or equal to my negotiated fee, if the above named client for whom I am financially responsible, fails to keep an appointment (without 8 hours notice given to the applicable PAMHC office.)
4. If, in the judgement of the staff of the Plains Area Mental Health Center, my income information has been reported fraudulently, or if my account becomes delinquent, I understand that the staff of the Plains Area Mental Health Center have the right to release my name and account information to a private collection agency.
5. I understand that if I fail to make payments under the terms of this agreement, a fee conference with the Plains Area Mental Health Center staff may be required before further professional services will be provided to the above named client.
6. I understand that if services are supported by third-party payers, those services may be subject to audit by authorized representatives of those payers for purposes of verifying the fact of service and I consent reviews of services rendered for such purposes. I further understand that such audits will not involve the sharing of information other than that authorized in Chapter 228 of the Iowa Code relating to disclosure of mental health information.

I have read the above, regarding fees at the Plains Area Mental Health Center. I understand this and I agree to be responsible for payment of charges.

Signature of Person Responsible For Payment _____

Signature Witnessed By: _____

Date Signed: _____ Effective Date: _____

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pages 113-132

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APPENDIX III

ADDITIONAL FIGURES

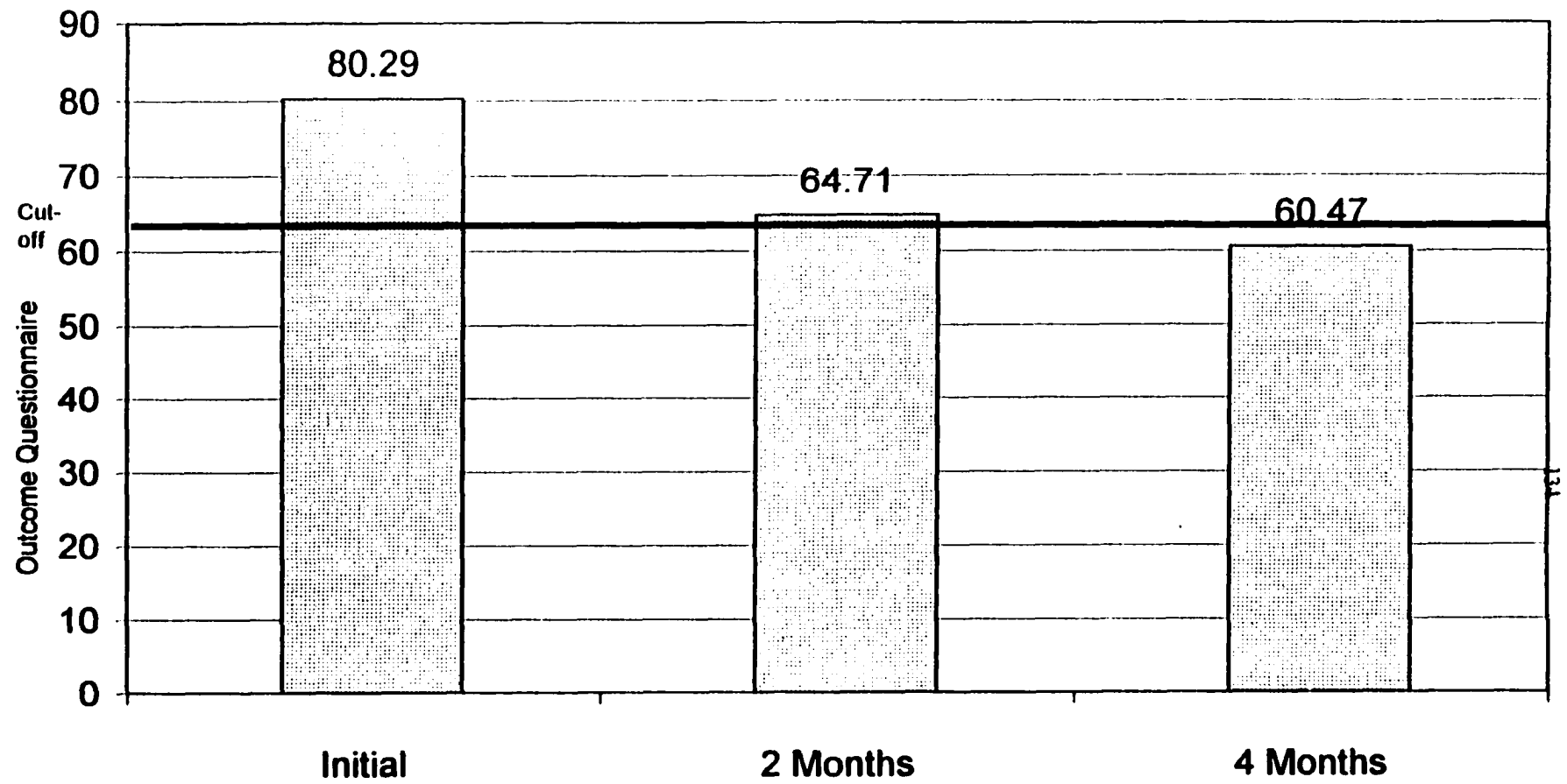


Figure 1. Symptoms and Functioning Across Time for All Participants

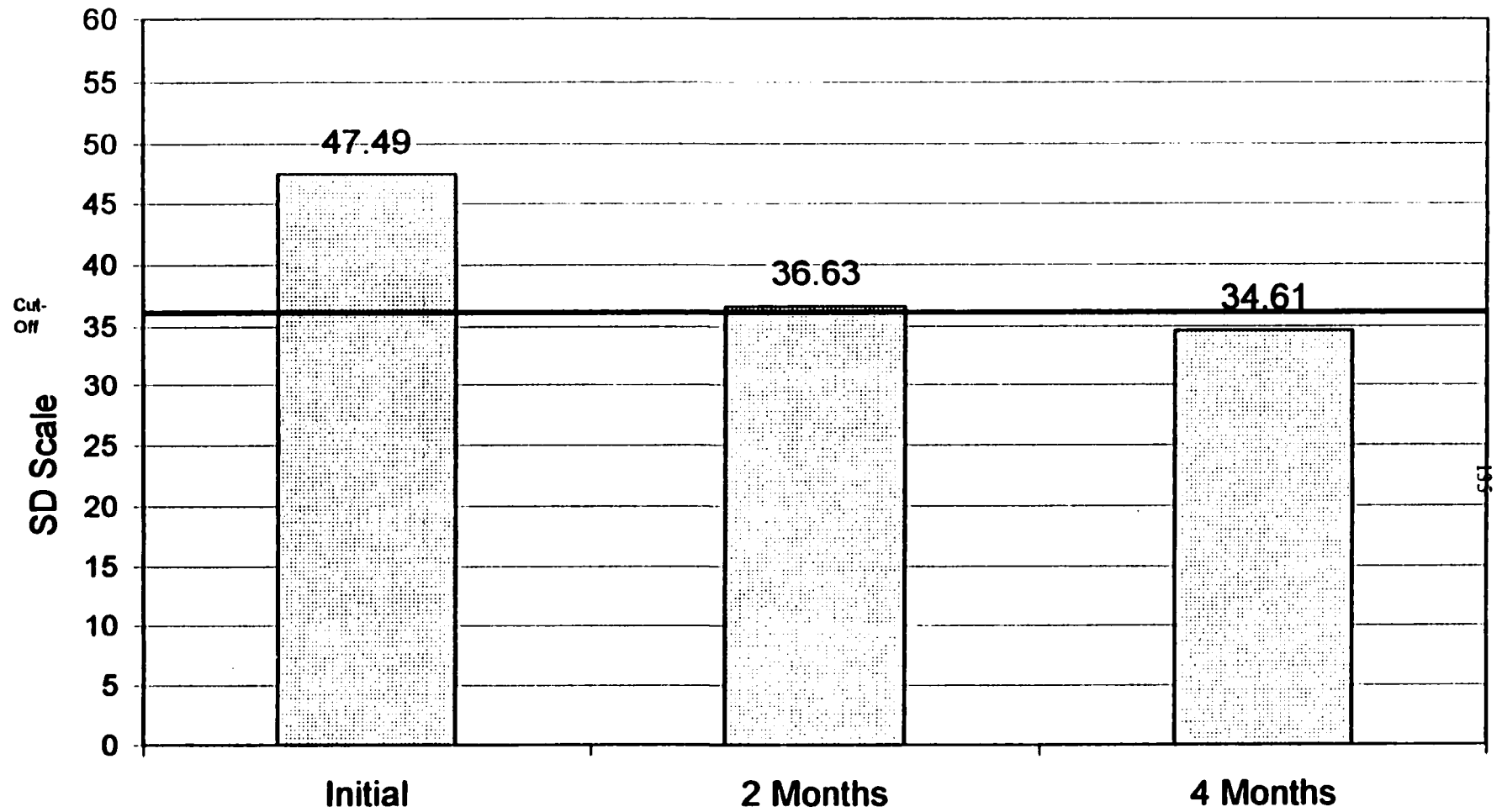


Figure 2. Symptom Distress

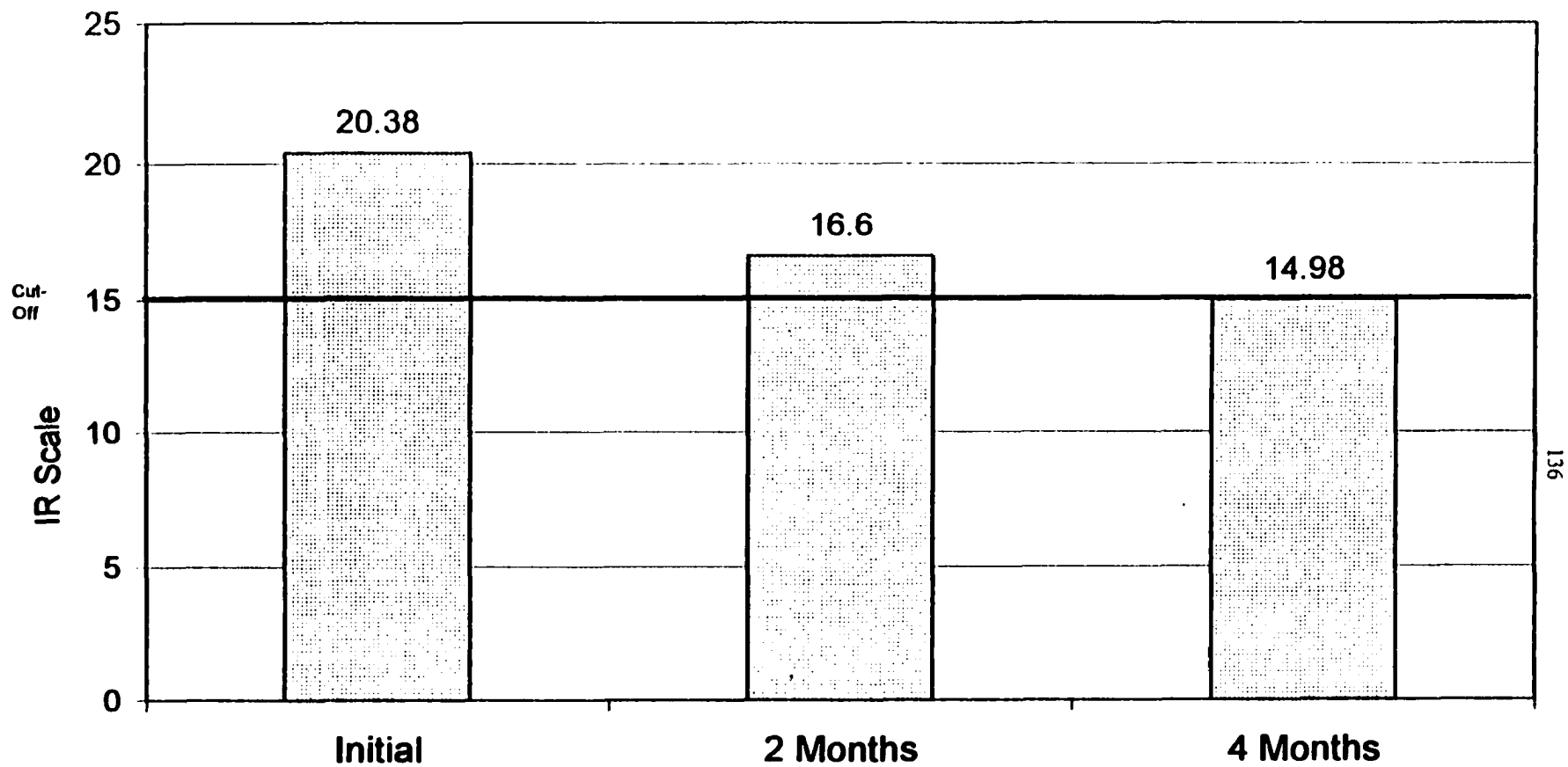


Figure 3. Interpersonal Relationship Problems

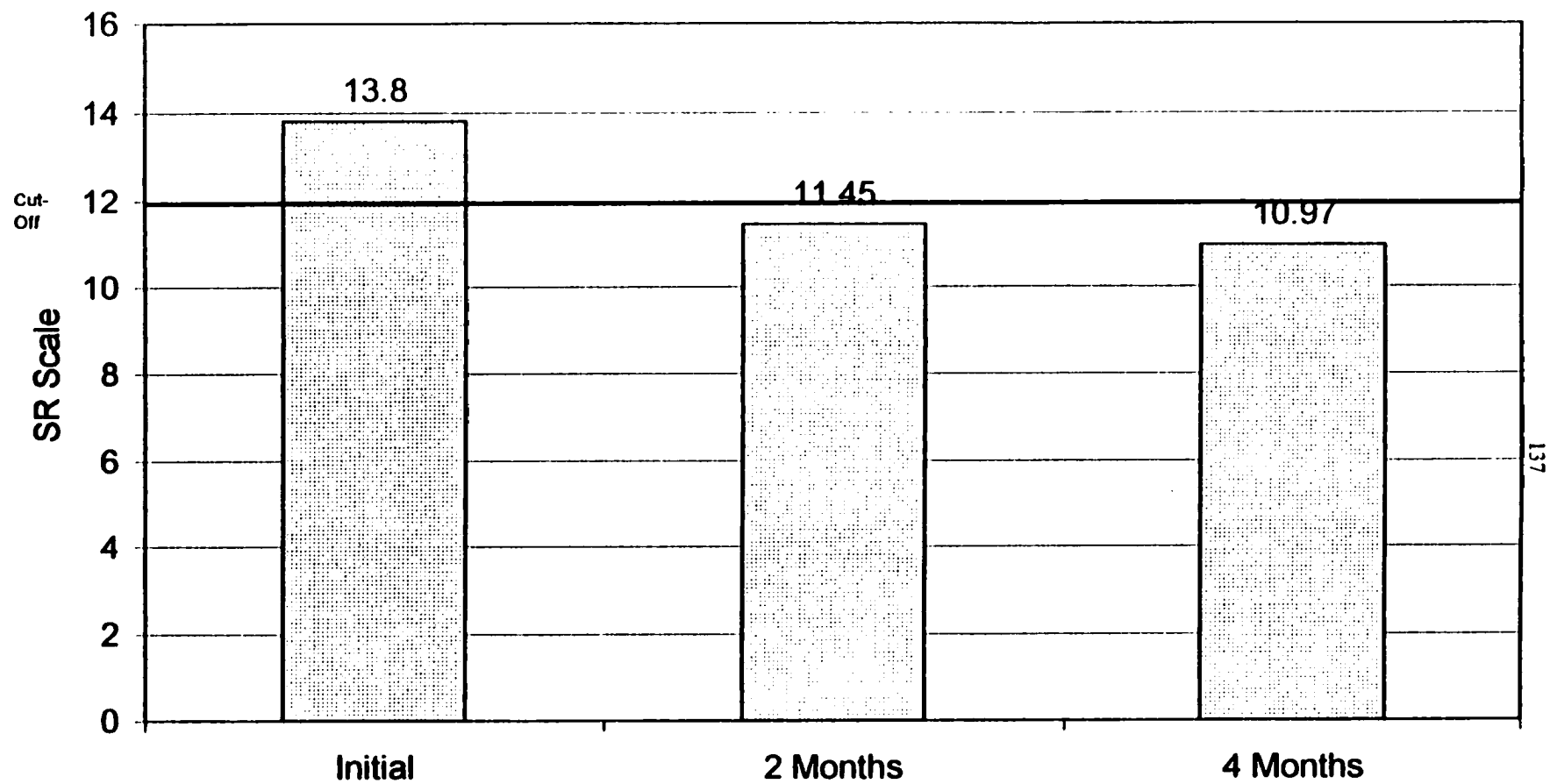


Figure 4. Problems in Social Role Functioning

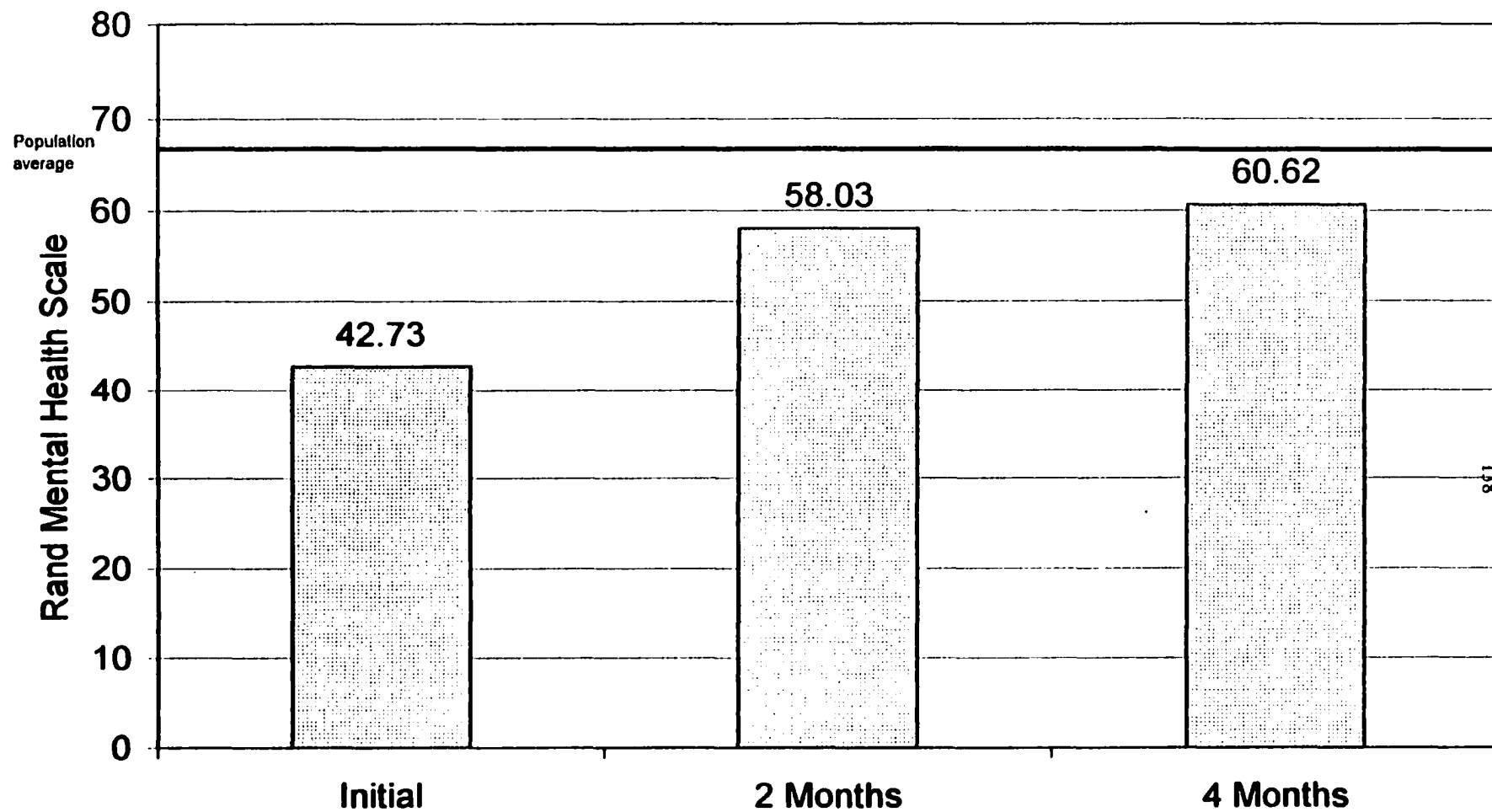


Figure 5. Rand Mental Health

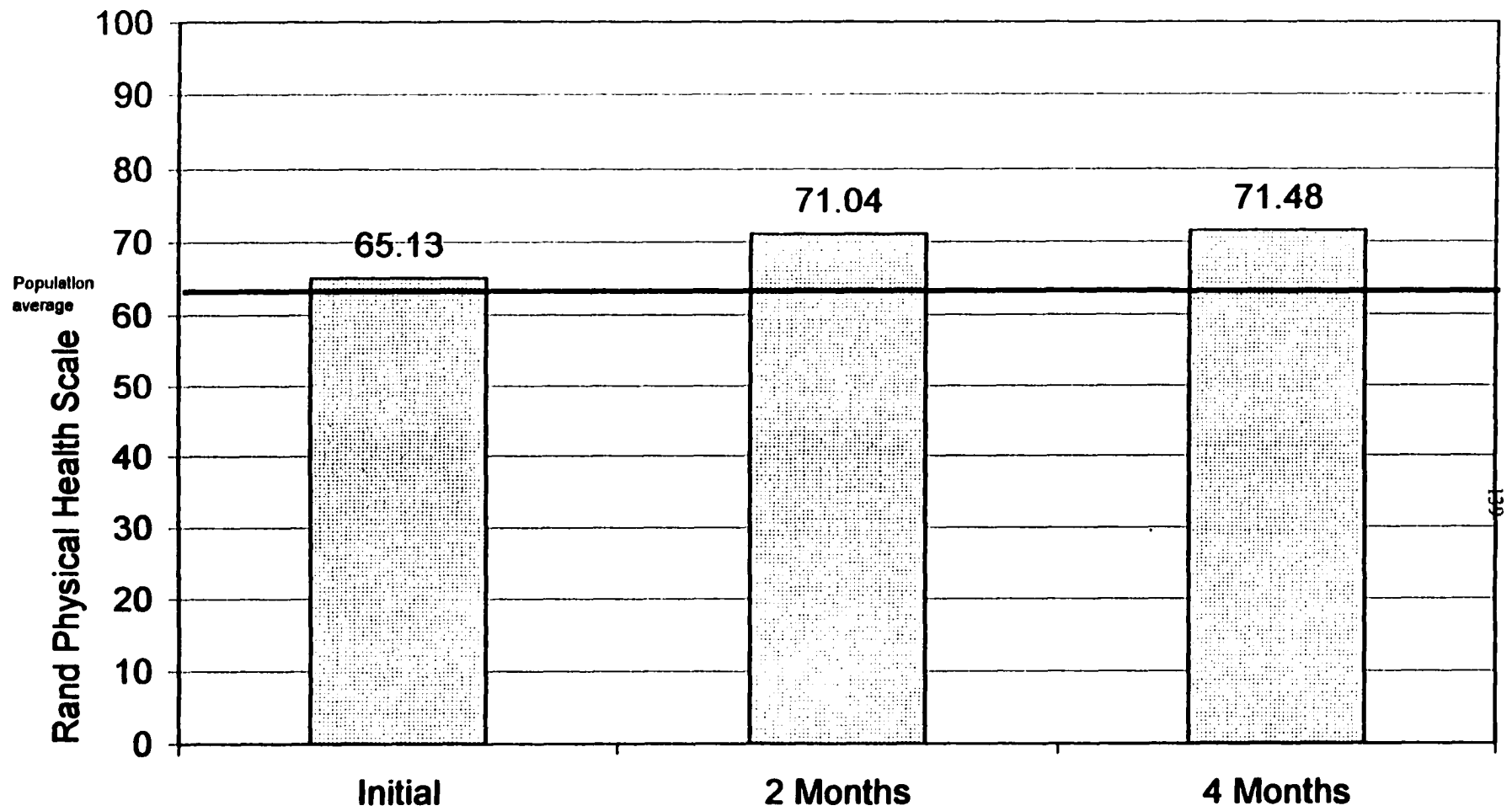


Figure 6. Physical Health

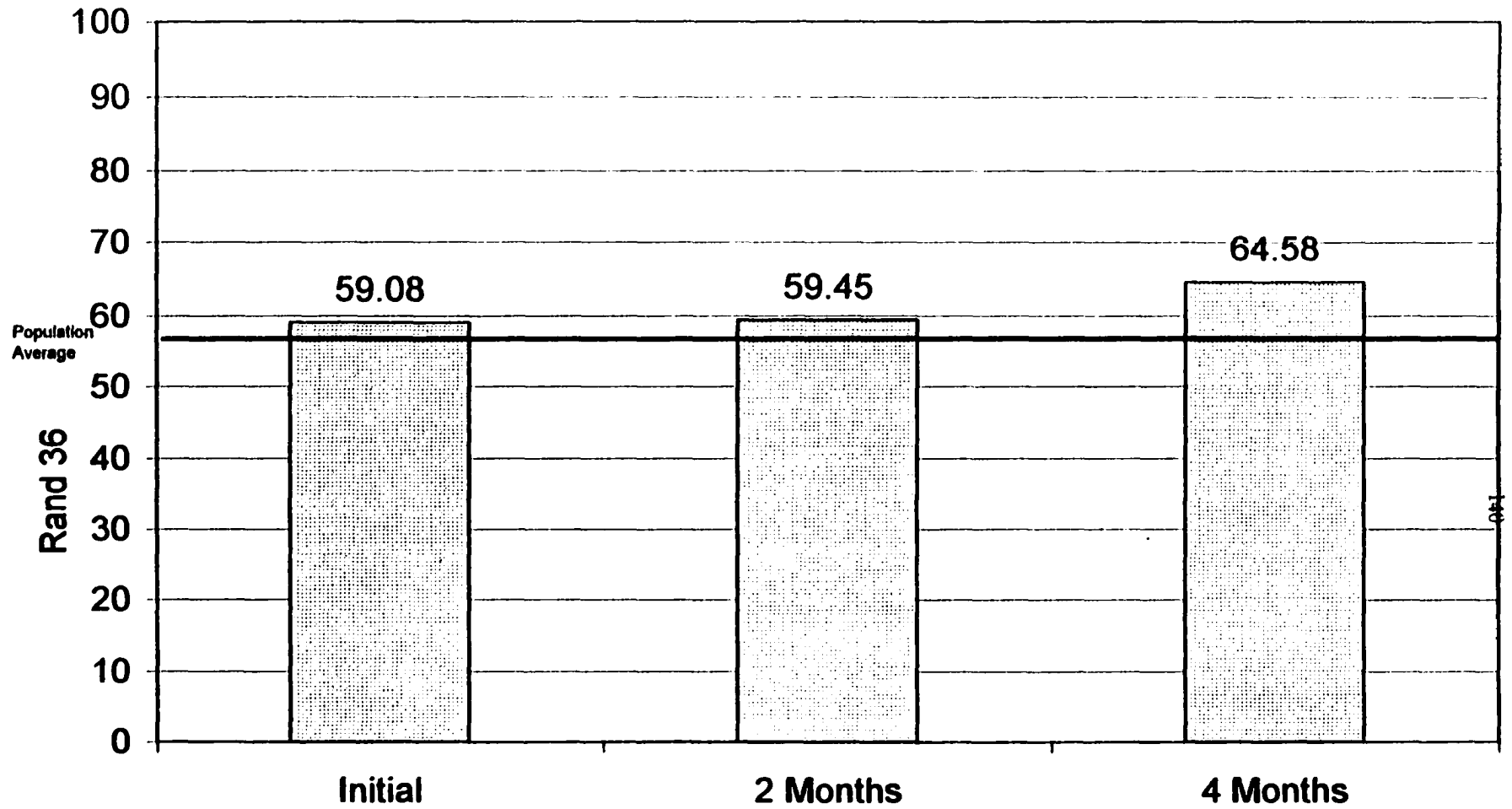


Figure 7. General Health

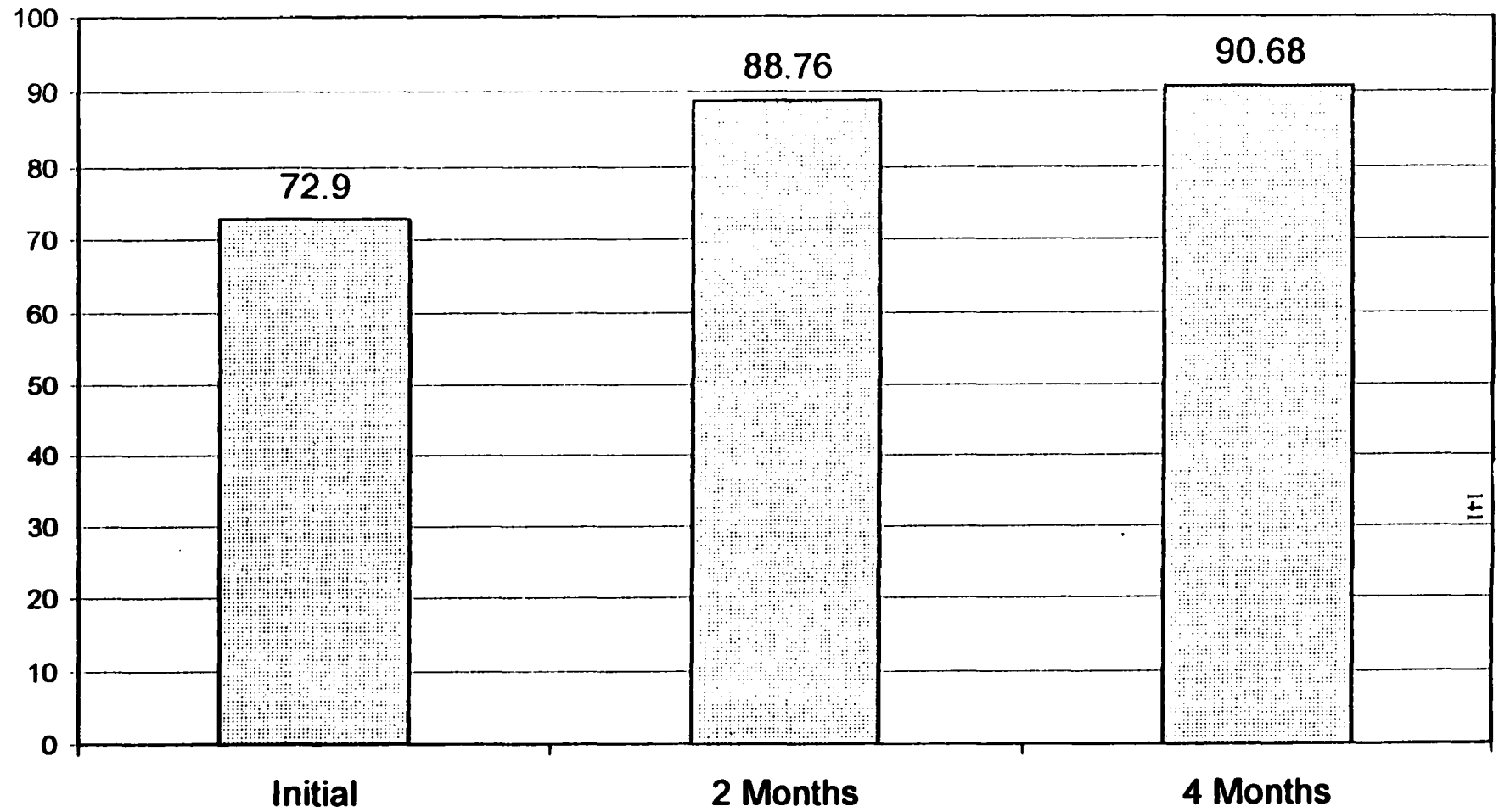


Figure 8. Mental Health Composite Measure

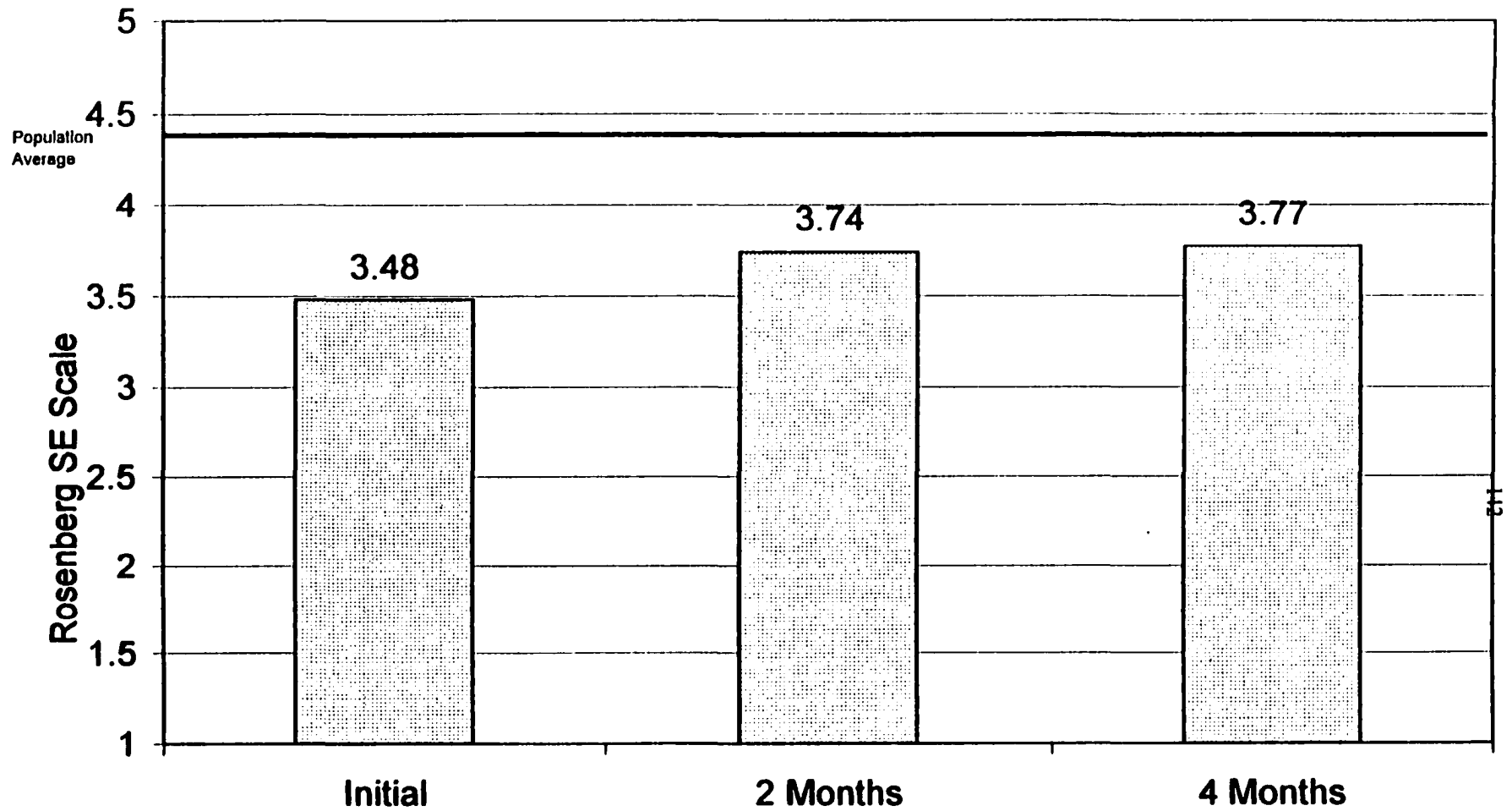


Figure 9. Self Esteem

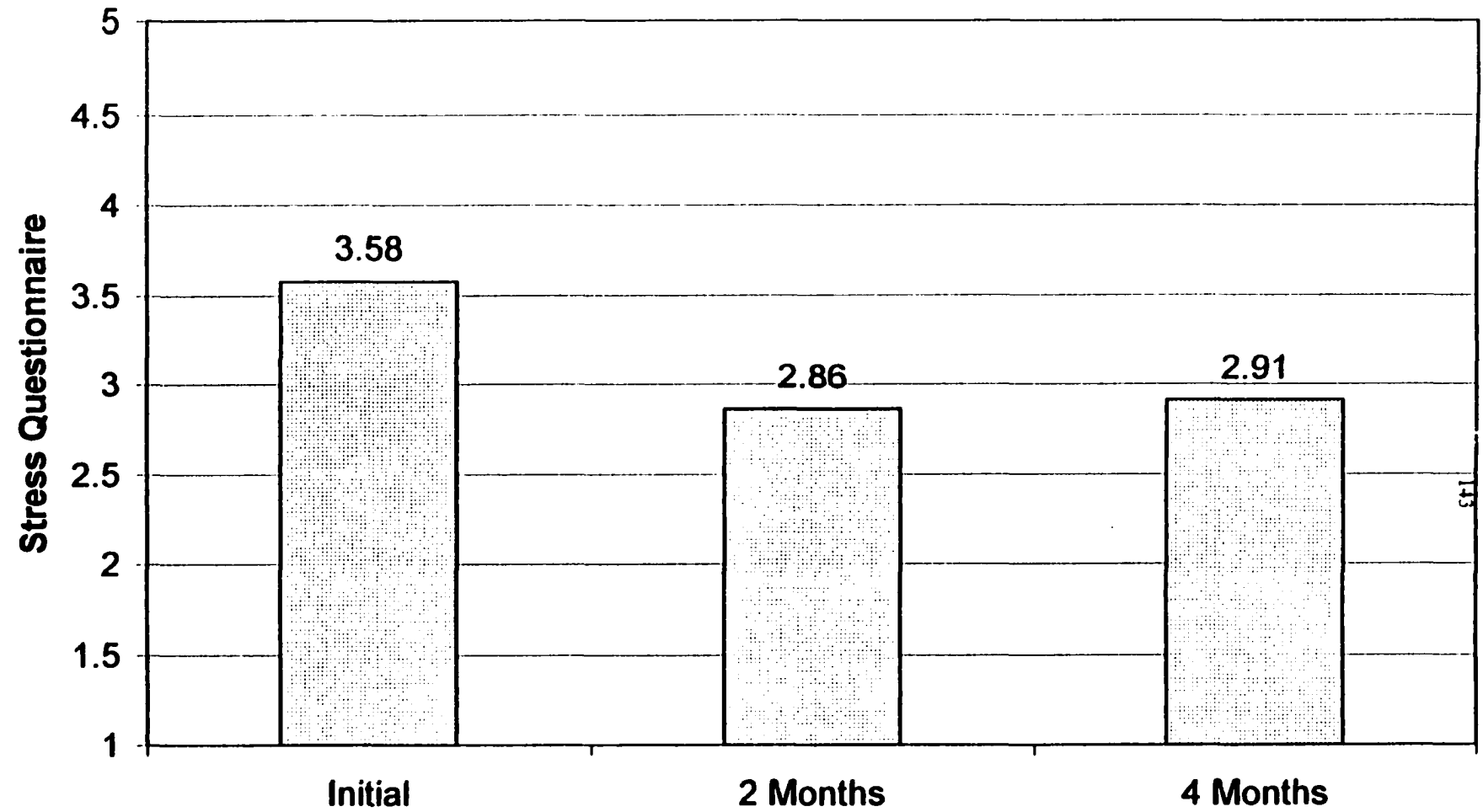


Figure 10. Stress Level

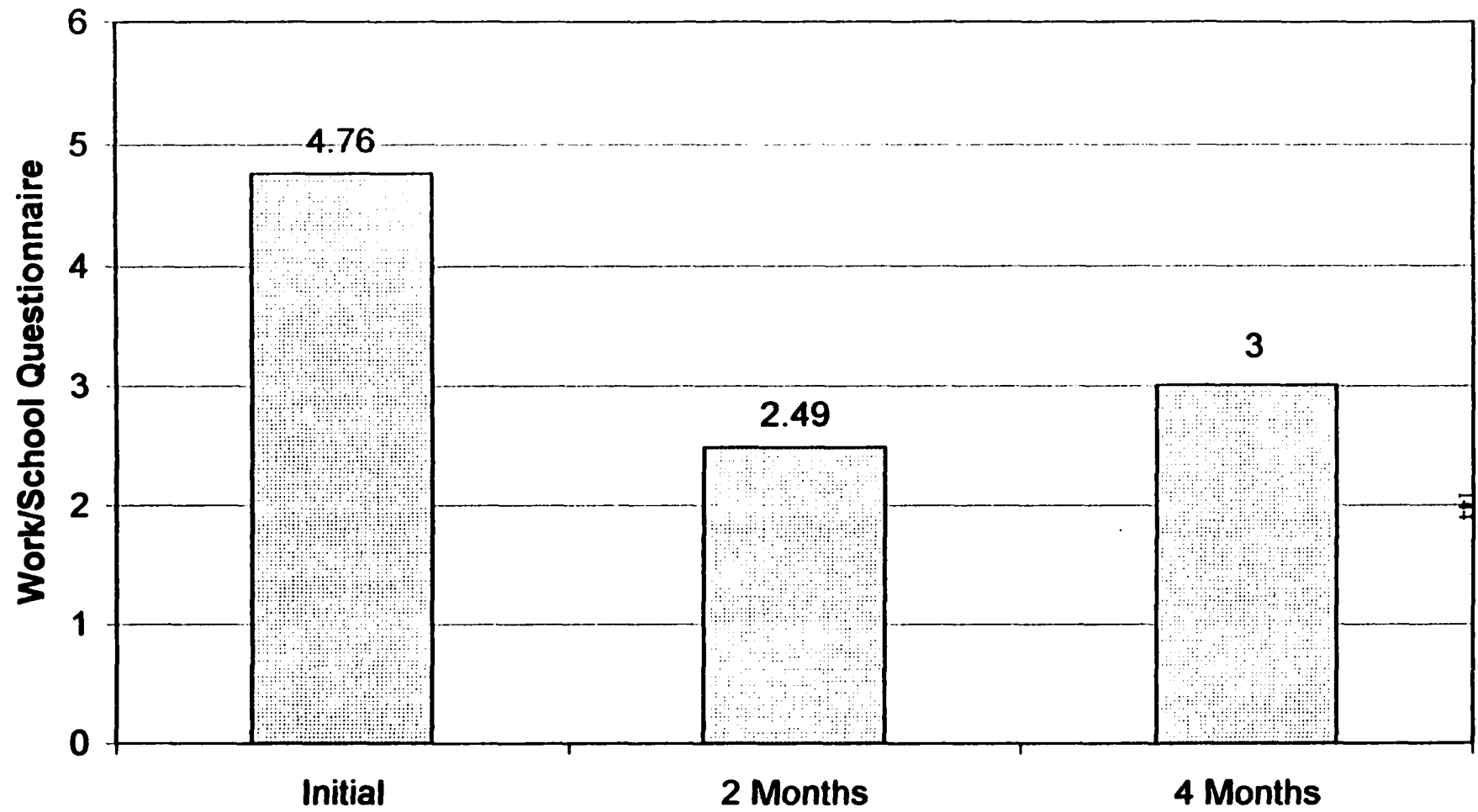


Figure 11. Work Related Problems

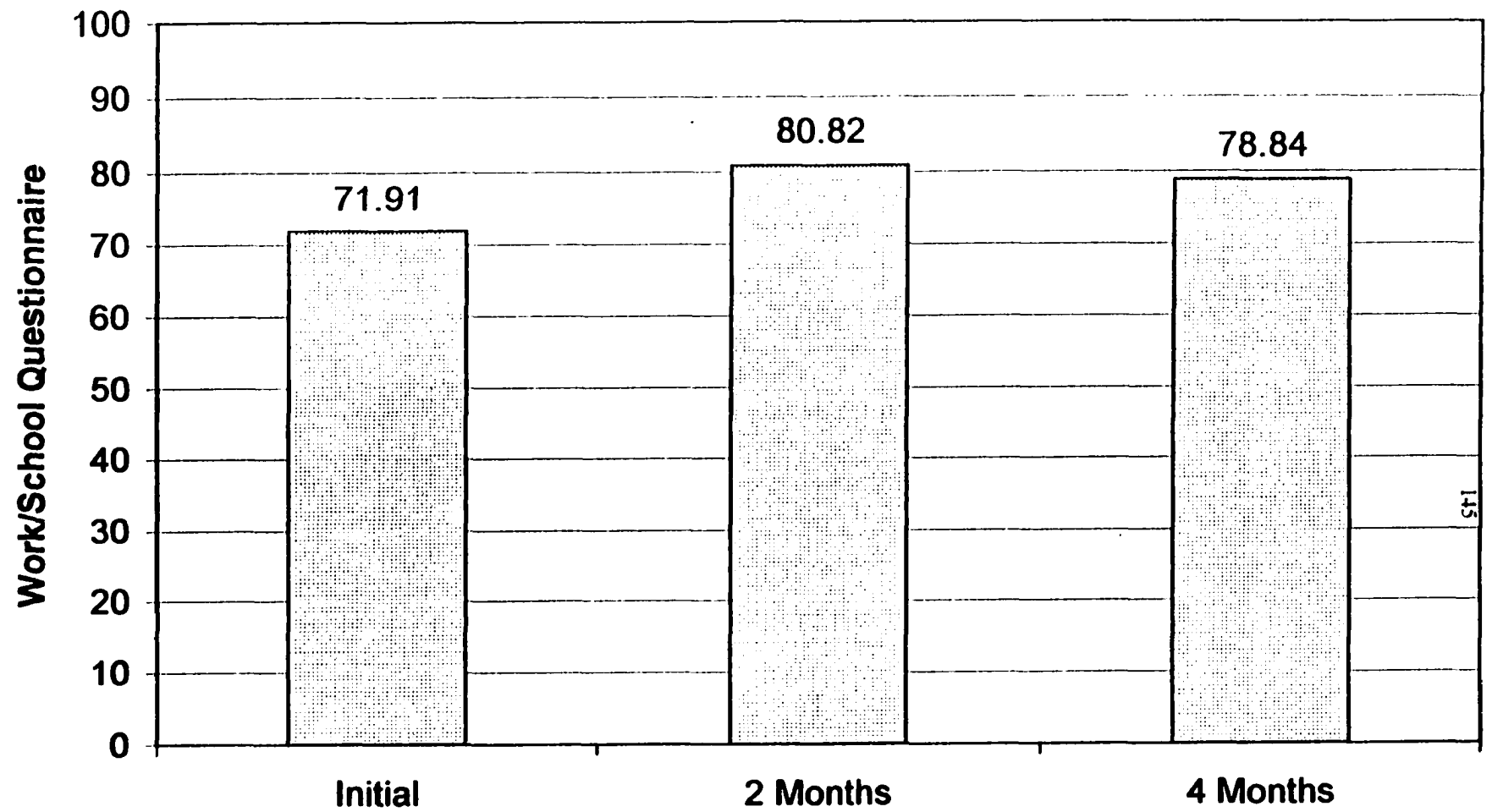


Figure 12. Percentage Work Productivity

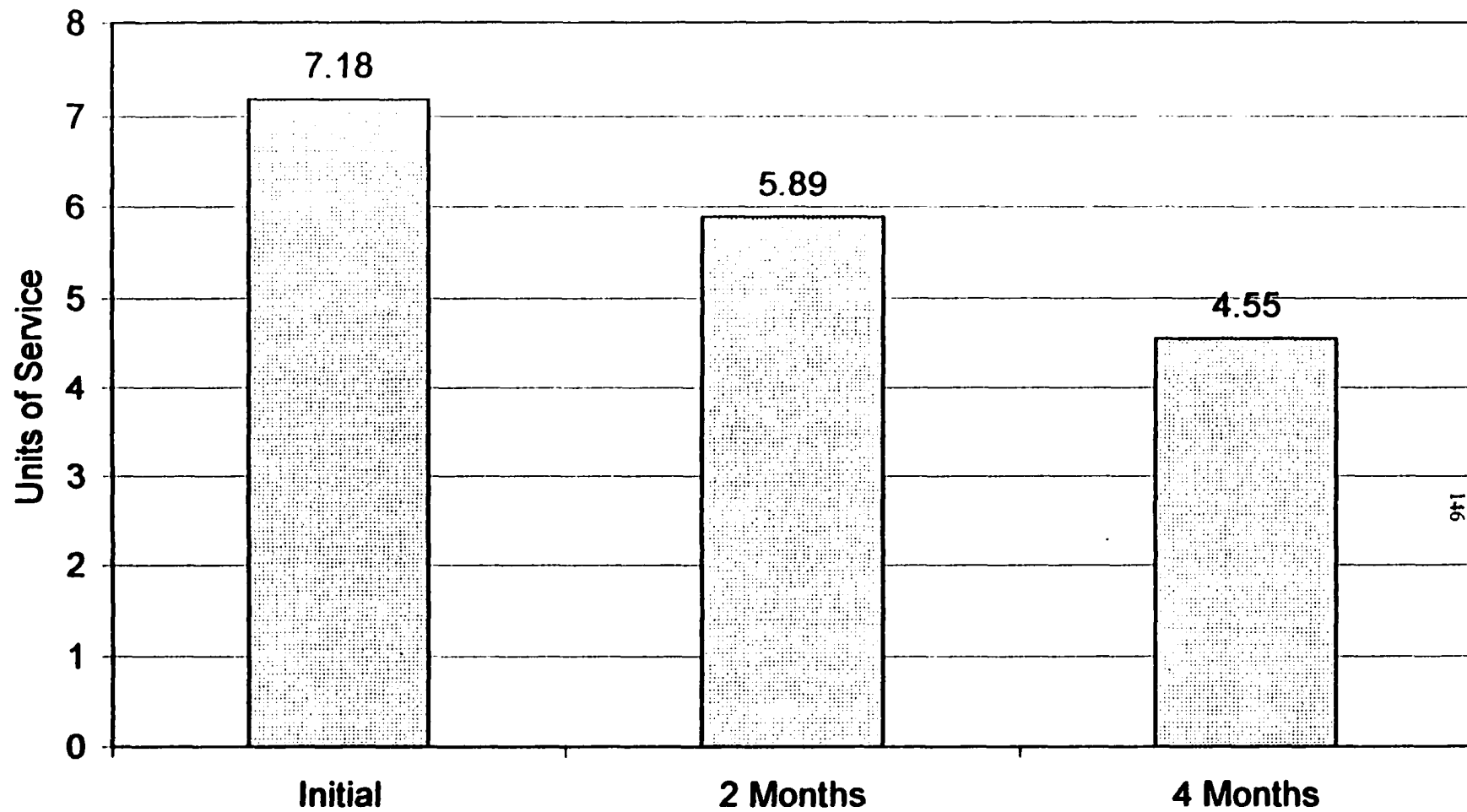


Figure 13. Service Utilization

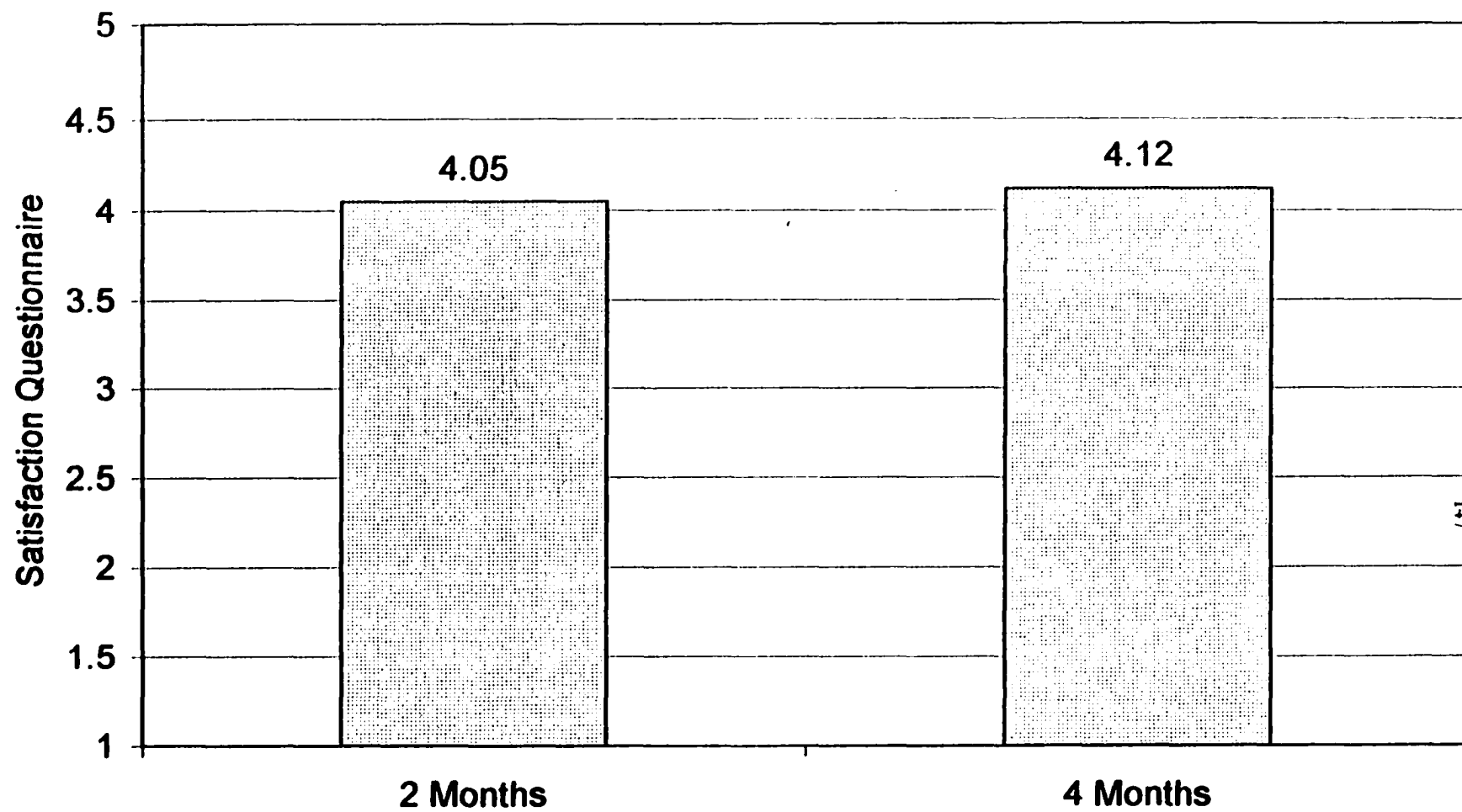


Figure 14. Client Satisfaction

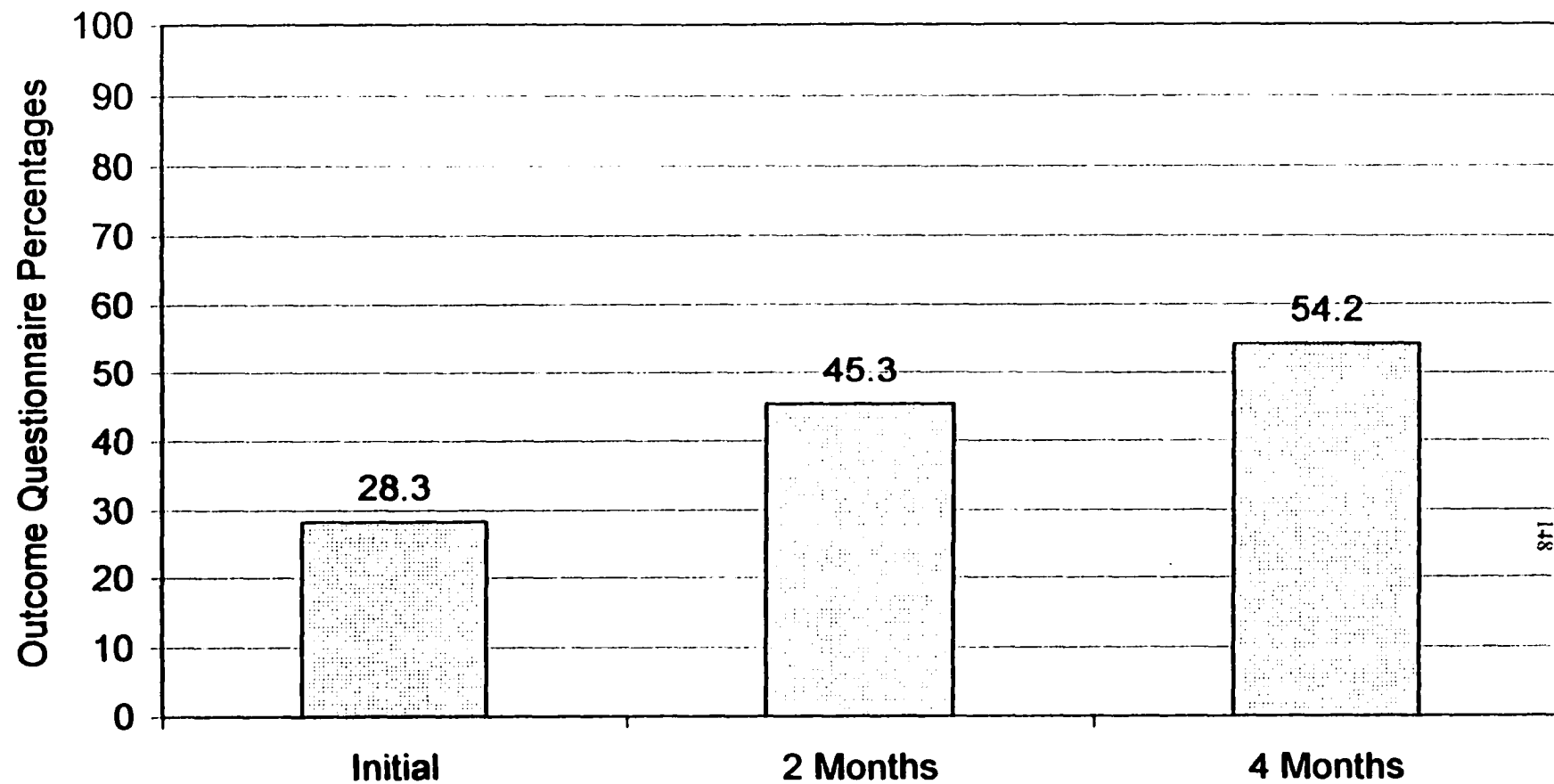


Figure 15. Percentage Of Clients Falling within the Healthy Range for Symptoms and Functioning

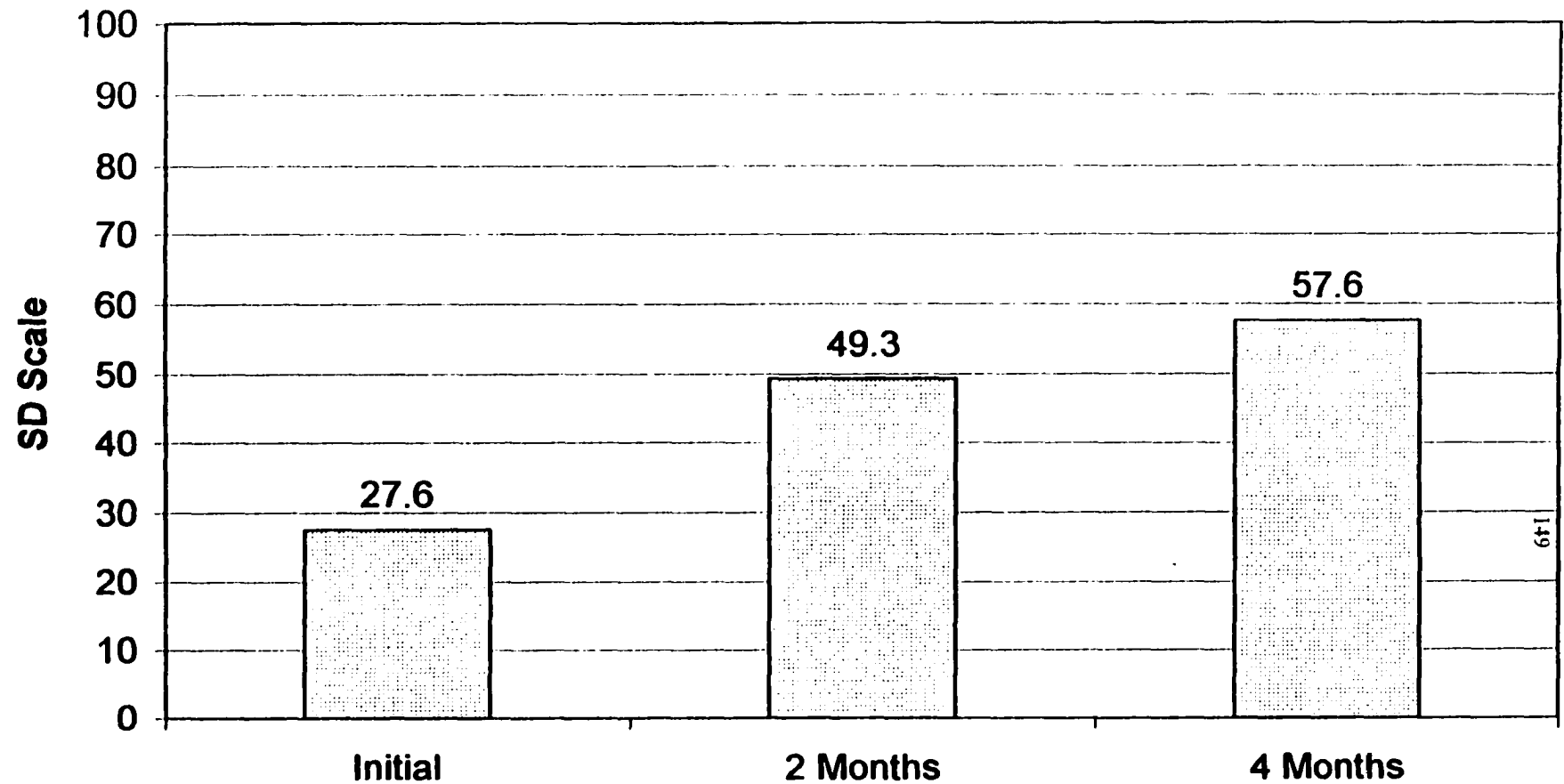


Figure 16. Percentage of Clients Falling Within the Healthy Range for Symptom Distress

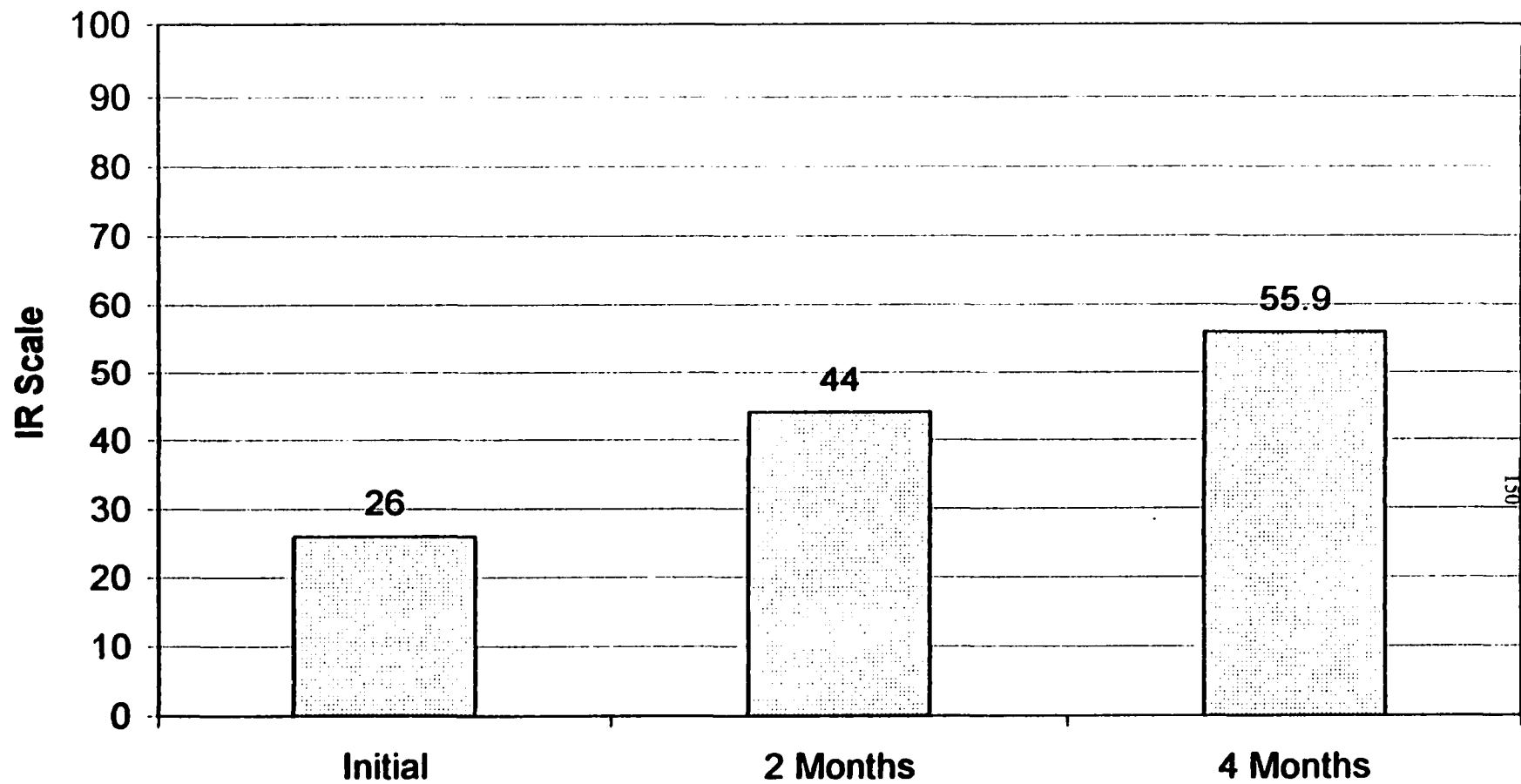


Figure 17. Percentage of Clients Falling Within the Healthy Range for Interpersonal Relationships

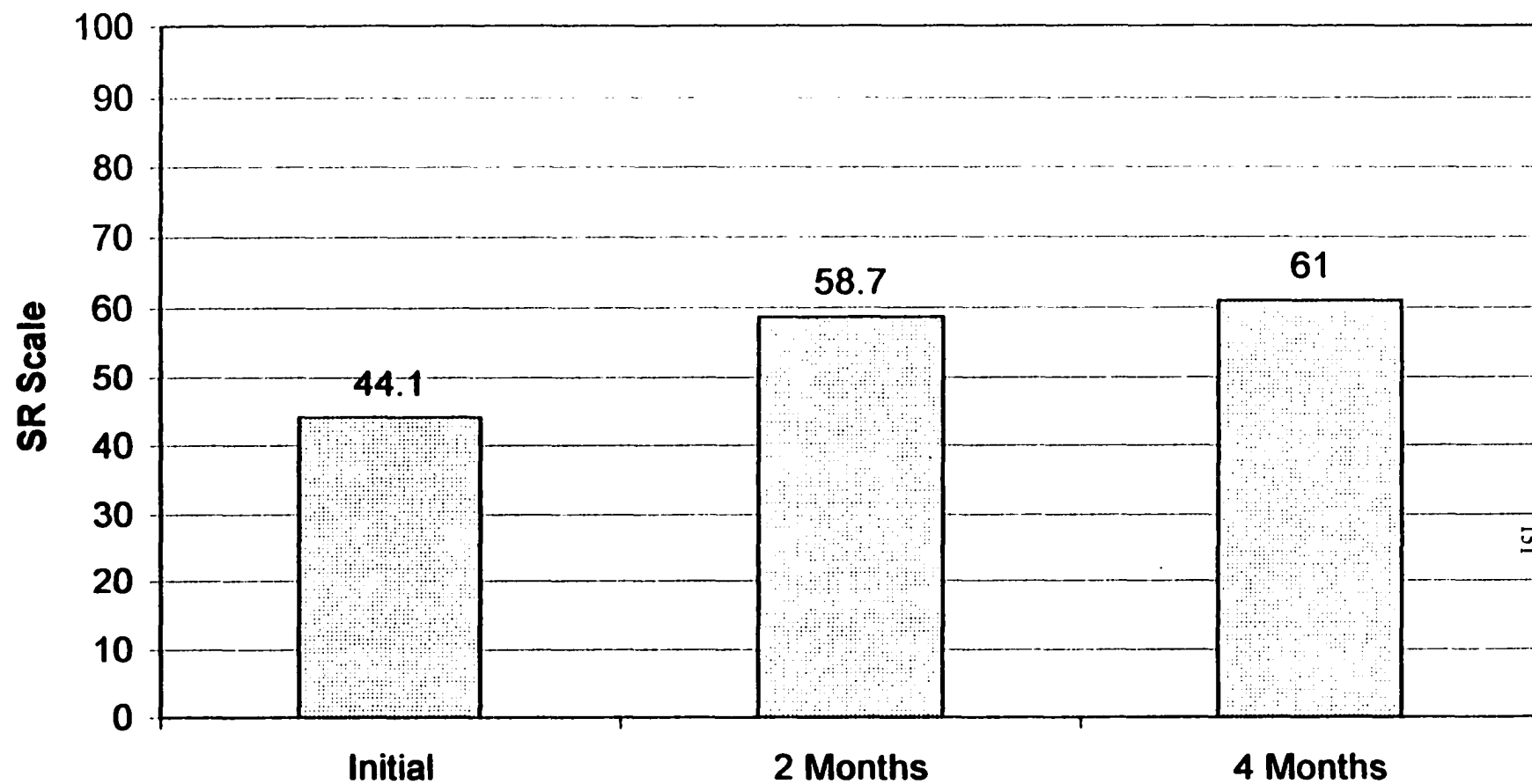


Figure 18. Percentage of Clients Falling Within the Healthy Range for Social Role Functioning

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